

# INITIAL ENVIRONMENTAL EXAMINATION

# PROJECT/ACTIVITY DATA

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Project/ Activity Name:	Malawi Apatseni Mwayi Atsikana Aphunzire (AMAA)		
Amendment (Y/N):	Y – Amendment #2		
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	Malawi Apatseni Mwayi Atsikana Aphunzire [1] (AMAA) - IEE		
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	https://ecd.usaid.gov/repository/pdf/49766.pdf (E3 Gender Office		
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1

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Prepared by:	<u> </u>	SCI- MALAWI-AMAA-Cor	struction team
		(martin.mutabazi@saveth	echildren.org,
		tisaiwale.chimphamba@s	
		jeffrey.goveia@savethech	<u>illdren.org)</u>
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ENVIRONMENTAL COM	IPLIANCE REVIEW DA	ATA .	
Analysis Type:		IEE Amendment # 2	
<b>Environmental Determin</b>	nation(s):	Categorical Exclusions; N	egative Determinations with
		Conditions	_
Climate Risk Manageme	ent Analysis:	A Moderate Risk for construction and building use due	
		to increased temperatur	es, and a High Risk for
		building functions due to e	extreme weather events and
		possible flooding (Section	4.2 & Annex A)
Additional Analyses/Re	porting Required:	Environmental Monitorir	ng and Mitigation Plans
		(EMMPs)	
Analysis Expiration Dat	e:	1 July 2023	

# THRESHOLD DECISION MEMO AND SUMMARY OF FINDINGS

# PURPOSE AND SCOPE OF THE INITIAL ENVIRONMENTAL EXAMINATION AMENDMENT

The purpose of this IEE amendment # 2 is to review the potential environmental impacts of planned secondary school construction activities that will be undertaken by the Malawi *Apatseni Mwayi Atsikana Aphunzire* (AMAA) Project. The parent USAID/E3 Bureau IEE¹ for this program was approved 14 December 2016, with a Categorical Exclusion for all activities except for school construction; construction activities were Deferred as the details were not yet available to allow for meaningful analysis of potential environmental impacts and mitigation planning for these activities.

Amendment 1 of the IEE assessed and addressed environmental impacts related to school and water / sanitation construction in Mwalasi and Mkotoamo districts. This Amendment assesses and addresses environmental impacts related to planned construction activities at Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde in Balaka district. All other non-construction related AMAA project activities have been Categorically Excluded from further environmental review per the parent IEE. For any subsequent construction of schools under AMAA, site-specific amendments to this IEE must be prepared. This IEE amendment compiles site plans, drawings, photos, and analyses; reviews potential environmental impacts for each construction site; and establishes conditions for implementation that will be operationalized via the project Environmental Mitigation and Monitoring Plan(s) (EMMPs).

## **Brief Activity Description:**

Six new community day secondary schools (CDSSs) are planned for construction in Balaka District (approximately 200 students each – at least half being girls) to be occupied in the academic year beginning in FY19 Q4 (or earlier, if complete). All six schools addressed in this IEE Amendment are planned for

construction in year 3 of the project, following another five schools and one dormitory which were addressed in previous IEE amendment in year I of the project.

# PROJECT/ACTIVITY SUMMARY

# **ENVIRONMENTAL DETERMINATIONS**

Upon approval of this document, the determinations become affirmed, per Agency regulations (22 CFR 216).

The following table summarizes the environmental determinations, based on an analysis of potential environmental impacts, applicable to the specific projects/activities for all construction sites established under AMAA.

TABLE 1: ENVIRONMENTAL DETERMINATIONS

Projects / Activities	Categorical	Negative	Positive	Defermel
Projects/Activities	Exclusion	Determination	Determination	Deferral
Project/Activity 1: Activity 1.1: School Construction  Activity 1.2: Science		X (w/ conditions)		
Classroom Construction and Operation				
Project/Activity 2: Activity 2.1: Construction or rehabilitation of small-scale water and sanitation infrastructure, including protection of existing water sources. This may include boreholes, shallow wells, latrines, and spring capping and conversion of open wells to pumps, including associated infrastructure such as towers/tanks/standpipes.  Activity 2.2: Capacity building for WASH equipment/system maintenance	X	X (w/ conditions)		
Project/Activity 3: Land Acquisition		X (w/ conditions)		

## **BEO SPECIFIED CONDITIONS OF APPROVAL**

#### **RECOMMENDED ACTIONS**

The conditions required of this action are:

- Categorical Exclusions. All proposed activities except for construction, water, sanitation, and obtaining land tenure rights activities are Categorically Excluded, as they represent education, technical assistance, or training programs; analyses, studies, academic or research workshops; and documentation and information transfers. These activities do not normally have an adverse direct, indirect, or cumulative impact on the environment.
- 2. **Mission Activity Manager Role.** Should the activity, as observed by the Mission Activity Manager or the Agreement Officer's Representative (AOR) (or their designee) identify potential adverse impacts not previously identified, the Activity Manager will notify the AOR and the AOR will cease operations until the appropriate environmental analysis can be completed.
- 3. Environmental Mitigation and Monitoring Plans (EMMPs). All construction activities, except for studies and planning, will need to have site-specific EMMPs prepared. These EMMPs should provide sufficient information for meaningful monitoring of efforts to reduce foreseen environmental impacts. Each EMMP must be in place and approved prior to the obligation of funding for physical construction activities, along with an appropriate modification to the award regarding any updated environmental compliance requirements. For those activities encompassed by the IEE amendment that have the potential for adverse environmental or social impacts (e.g. construction), the implementing partner will submit an Environmental Mitigation and Monitoring Report to the AOR, MEO, REA, and E3 BEO for review and concurrence. The EMMPs must identify how the contractor will assure that IEE conditions that apply to activities supported under this award are implemented. In the case of a subcontract, the contractor may elect to require the subcontractor to develop their own EMMP. The AFR EMMP Factsheet provides guidance and sample EMMP formats: http://www.usaidgems.org/Documents/lopDocs/ENCAP EMMP Factsheet 22Jul2011.pdf.
- 4. Climate Risk Management. Activities that have not already been determined to be low risk are required to undergo climate risk assessment. An initial Climate Risk Management (CRM) screening, as required by ADS 201, has been completed for dormitory and school construction and has been included in this IEE Amendment in section 4.2. This review was completed using the USAID Climate Risk Screening and Management Tool for Activity Design (Matrix Template), and a summary of the CRM process and key findings and recommendations is provided in Annex A. This is an initial CRM assessment. The responsibility for assessing and addressing climate risk lies with the engineer-of-record. Thus, climate risk management will be a component of the engineering design.
- 5. **Water Supply and Sanitation:** Good-practice design standards will be specified in the EMMP and must include siting of new wells far from groundwater contamination sources (e.g., latrines, cesspits, dumps), exclusion of livestock from water points, prevention of standing water at water supply points, the provision of latrines with handwashing stations where people are expected to spend significant portions of their day, and the provision of showers / bathing stalls where people are expected to live. This must be consistent with USAID's *Sector Environmental Guidelines: Water Supply & Sanitation:*

A Water Quality Assurance Plan (WQAP) must be a part of the EMMP yet approved by the Regional Environment Advisor (REA). The WQAP ensures that all new and rehabilitated USAID-funded water supplies provide safe drinking water, defined as meeting local and WHO water quality standards. The WQAP template can be found here: <a href="http://www.usaidgems.org/wqap.htm">http://www.usaidgems.org/wqap.htm</a>.

- 6. Land Tenure & Land Use Rights. As USAID proposes supporting the construction of schools in rural and peri-urban Malawi, it is important to understand the issue of land ownership where the schools are to be located. The focus of the inquiry on displacement and compensation issues should be on legitimate landholders, including secondary or informal occupants and users of the land. This is consistent with good practice found, for example, in World Bank Operational Policy, the Voluntary Guidelines on Responsible Governance of Tenure, and USAID's Guidelines on Compulsory Displacement and Resettlement. "Ownership" and tenure type is only part of this analysis; another key aspect is determining who is currently using the land in a way considered legitimate by the local community, and consistent with the Malawi's 2016 Land Law that implements the 2002 Land Policy. The preferred means of compensation, if called for, is comparable land. This is the World Bank's approach to displacement in Malawi and consistent with USAID's Guidelines on Displacement. In May 2018, SCI as the implementing partner (IP) conducted land tenure discussions with the communities surrounding the potential schools to confirm that there are no significant land tenure problems and that the land has no substantial encumbrances.
- 7. **Integration and implementation of EMMPs**. The IP shall integrate their EMMPs into their project work plan, budget, implementation, and reporting activities using the identified monitoring methods as an element of regular project performance reporting. The IP shall assure that sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets, and report on their implementation as an element of sub-contract or grant performance reporting.
- 8. Integration of Compliance Responsibilities in prime and sub-contract and subgrant contracts/agreements. The USAID/E3 bureau and USAID/Malawi are committed to incorporating sound environmental review principles and screening, capacity building, monitoring, evaluations, and mitigation procedures specified in this IEE. The AOR and implementing partner shall ensure that provisions of the IEE, including the conditions and monitoring set forth herein, are incorporated into all prime and sub-contract and sub-grant agreements.
- 9. Environmental Monitoring Responsibilities. As required by ADS 204.3.4, the Education Team, via the Activity Manager or AOR, and the IP will "actively monitor ongoing activities for compliance with approved IEE and Categorical Exclusion (CE) recommendations, conditions, and mitigation measures." If new or unforeseen environmental consequences arise during implementation, the AOR will suspend the activity and initiate an appropriate further review in accordance with 22 CFR 216. USAID monitoring shall include regular site visits, at times with the Mission Environmental Officer (MEO) accompanying the AOR or designate in the field, and the regular review of reported environmental monitoring indicators from the IP (often synchronized with the reporting of performance indicators).
- 10. **New or modified activities**. As part of its Work Plan, the IP, in collaboration with the USAID AOR, shall review all on-going and planned activities to determine if they are within the scope of this IEE. If any new activities lead to substantial modifications to existing activities within the program elements covered by this IEE, an amendment to this IEE addressing these new activities shall be prepared for USAID review and approval. No such new activities shall be undertaken prior to formal approval of this amendment by the pertinent BEO(s).
- 11. **Revisions.** Any new activities, incremental funding, or change in geographic location or scope of any project or activity will require additional analysis and documentation consistent with 22 CFR

- 216. No activity falling under this requirement will be implemented unless an Environmental Threshold Decision, as defined in 22 CFR 216.3(a)(2), has been reached for that activity and documented in a Request for Categorical Exclusion (RCE), IEE, or Environmental Assessment (EA) signed by the pertinent BEO(s) and a signed copy delivered to the AOR.
- 12. **Compliance with Host Country Requirements**: Nothing in this IEE substitutes for or supersedes the Recipient's responsibility for compliance with all applicable and appropriate host country laws and regulations. Implementation will in all cases adhere to appropriate and applicable host country environmental laws and policies.
- 13. Limitations of IEE: This IEE amendment neither covers the use or procurement of pesticides as described in 22 CFR 216 and those activities in 216.2(d) [Positive Determination], 216.5 [Environmental Assessment] and/or FAA 118 or 119 [Tropical Forestry, Biodiversity], nor any activity that falls outside the bounds of the activities described herein. This IEE amendment also does not cover any road construction or rehabilitation. However, minor road works to facilitate transportation of equip to and from site will have to be implemented in with USAID Sector Environmental Guidelines for Rural Roads <a href="http://www.usaidgems.org/Sectors/roads.htm">http://www.usaidgems.org/Sectors/roads.htm</a>

#### **IMPLEMENTATION**

In accordance with 22 CFR 216 and Agency policy, the conditions and requirements of this document become mandatory upon approval. This includes the relevant limitations, conditions and requirements in this document as stated in Sections 3, 4, and 5 of the Environmental Analysis, and any BEO Specified Conditions of Approval.

# USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION PROJECT/ACTIVITY NAME: MALAWI APATSENI MWAYI ATSIKANA APHUNZIRE AMALIEE Am. #2

Approval:	Littleton Tazewell, Mission Director	Plz414 Date
Concurrence:	Teresa Bernhard, E3, Bureau Savironmental Officer	9/12/14 Date
Concurrence:	Brian Hirsch, AFR/SD/EGEA Bureau Environmental Officer	9/13/18 Date
Clearance	Cleared Roopa Karia, AFR/SD, Africa Region Climate Integration Lead	08/25/18 Date
Clearance:	Peter Trenchard, Deputy Mission Director	SI 2K K
Clearance:	Ryan Waither, Supervisory Program Officer	08/24/18 Date
Clearance:	Cleared Diana Prieto, E3 GENDEV Acting Office Director	8/21/18 Date
Clearance:	Michelle Chen, Education Office Director	8/23/18 Date
Clearance:	Robert Matengula, Mission Environmental Officer/CIL	8/21/2018 Date
Clearance:	Cleared Sylvia Cabus, Agreement Officer Representative	8/21/18 Date
Clearance:	Cleared Mark Hyland, USAID/Resident Legal Officer	08/28/18 Date
Clearance:	Cleared Agron Brownell Southern Africa Regional Environmental Advisor	08/27/18 Date

# **DISTRIBUTION:**

USAID/Malawi ED Team COR and Activity Managers
USAID/Malawi Office of Acquisitions and Assistance
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# 1.0 PROJECT AND ACTIVITY DESCRIPTION

#### 1.1 PURPOSE AND SCOPE OF IEE AMENDMENT

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22CFR216), is to provide a review of the reasonably foreseeable effects on the environment of USAID Malawi *Apatseni Mwayi Atsikana Aphunzire* (AMAA) project activities described herein, and recommend determinations and conditions for these activities. Upon approval, these determinations become affirmed, per 22CFR216, and specified conditions become mandatory obligations of implementation. This analysis also documents the results of the project/activity level Climate Risk Management process in accordance with USAID policy (specifically, ADS 201 mandatory reference 201mal 101216).

Only environmental impacts related to the construction activities at six sites (Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde) in Balaka district will be discussed in this IEE amendment to resolve the earlier Deferral designation—all other activities under the Malawi AMAA project have been Categorically Excluded from environmental review as addressed in the parent IEE. For any subsequent construction of schools under AMAA, site-specific amendments to this IEE must be prepared. This IEE amendment compiles site plans, drawings, photos, and analyses; reviews potential environmental impacts for each construction site; and establishes conditions for implementation that will be operationalized via the project Environmental Mitigation and Monitoring Plan(s) (EMMPs).

#### 1.2 PROJECT OVERVIEW

USAID's primary focus in the Malawi Country Development Cooperation Strategy (CDCS) is on promoting Malawi's self-reliance and economic development, which will lead to increases in the quality of essential services. The delivery of quality education services and the resulting increase in learning levels will strengthen the impact of investments in education, and lead to improved human resource capacity to deliver other services such as health, agriculture and food security; decreased dependence on humanitarian assistance; and increased ability of Malawians to make a positive contribution in the economy. Education is the foundation to social, economic and political development; a productive, educated human resource base – including girls – is essential to Malawi achieving its development goals.

Girls' education is an important target in achieving Malawi CDCS objectives. Since Malawi introduced free primary education in 1994, the numbers of boys and girls enrolling in the first four years of primary school has grown exponentially; however, girls tend to fare worse than boys in examinations. Despite progress made to date, only a small percentage of girls and boys can go to secondary school due to a lack of schools and trained teachers; once there, more girls drop out than boys. As such, many girls leave the education system without having attained basic literacy, numeracy, or essential life skills, making them more dependent on marriage¹ and a husband's support. Societal norms that lead to gender inequalities make girls responsible for most household chores, resulting in them arriving late to school or reducing time for homework, causing them to fall behind. This gender bias and societal perception of what a girl's role can and should be and what she is capable of also influences whether a guardian will allocate scarce resources to support a girls' education. Sexual violence and abuse, the lack of sexual and reproductive health knowledge and youth-friendly services, and girls' inability to negotiate safe sex due to restrictive gender norms can mean many girls are forced to drop out of school due to pregnancy. Education quality also acts as a barrier to enrolment and retention. Nearly half of the current cadre of secondary school teachers do not hold a professional education qualification — either a certificate, diploma or degree.

# Overall AMAA Site Selection Methodology

Balaka District is highlighted in USAID/Malawi's CDCS as one of the three focus districts for full integration among the Economic Growth, Education, Health, and Food for Peace programs (Figure 1). Within Balaka

<sup>&</sup>lt;sup>1</sup> See Annex J: Marriages Systems in Malawi: Control and Ownership of Land under Matrimonial System in Malawi

district, communities were selected based on 15 criteria, such as the number of villages that would feed into the school, the number of children in the area selected for secondary school, and whether a community had contributed to the construction of school blocks (see Annex C for a crosswalk of each community in Balaka and the 15 criteria). School sites were also selected so that at least 50 percent of their planned 200 students will be female. The first-round of selected communities in Balaka are Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde) see Figure 2 for approximate locations in Balaka District). Specific coordinates for and satellite views of the selected Balaka sites can be found in Section 2.1. The selection of the six sites was done in consultation with Save the Children using the guiding principles: 1) the school should have land where the school could be constructed; 2) the community around the school must be active and demonstrate some spirit of self-help; and 3) there is a demonstrated community commitment to construct teachers' houses.

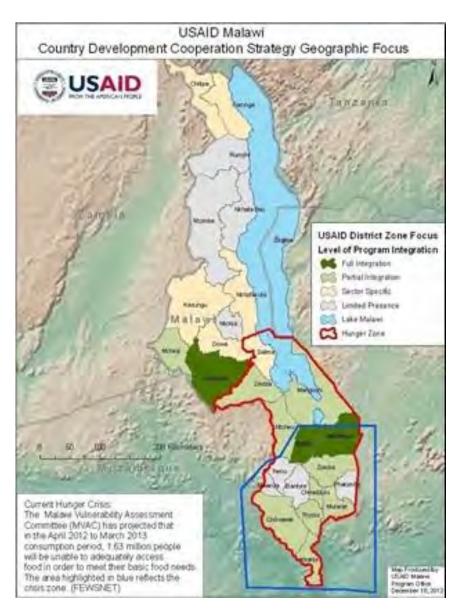


Figure 1.USAID/Malawi CDCS Map of Priority Districts

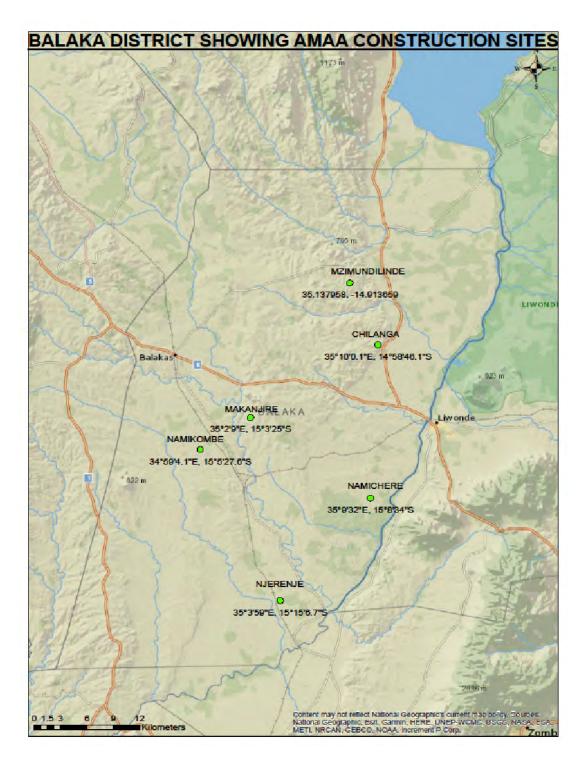


Figure 2. Maps locations of AMAA Sites Selected in Balaka District.

#### 1.3 PROJECT DESCRIPTION

The overarching goals of AMAA are to increase enrollment and retention of adolescent girls in secondary schools, and reduce negative perceptions about the value of educating girls. With media and gender as cross-cutting issues, the program has the following objectives:

- 1) Build the agency, knowledge, and protective assets of girls in secondary school;
- 2) Increase family commitment and capacity to invest in girls' education;
- 3) Foster a girl-friendly and supportive school environment;
- 4) Increase access to youth-friendly adolescent reproductive health services;
- 5) Provide alternative education pathways for girls who have dropped out of secondary school due to pregnancy and/or early marriage;
- 6) Increase girls' access to secondary education by constructing Community Day Secondary Schools (CDSS) in remote communities and by constructing a girl's dormitory near a CDSS;
- 7) Enable teacher availability in these remote CDSSs by providing materials and guidance to communities to construct houses for teachers; and,
- 8) Ensure appropriate land rights for CDSS, dormitory, and teacher housing sites are attained through informed, transparent, and equitable means.

AMAA will target girls aged 13-19 who: (1) have completed primary school and are at risk of or have failed to transition to secondary school; (2) have enrolled in lower secondary school and are at risk of dropping out; and (3) who have dropped out of secondary school because of pregnancy or early marriage.

The two activities within the AMAA program that will be addressed in this IEE amendment are:

Construction of Community Day Secondary Schools (CDSSs). Six new CDSSs will be built in Balaka District (200 students each – at least half being girls) in the communities of Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde. These schools will be constructed in year 3 and, if complete, will be occupied in the academic year beginning in FY19 Q4. All schools will have a total of seven buildings: two classroom blocks each with an administration block in between; one building for a science classroom that includes a storage space for chemicals and all associated laboratory equipment and preparation area; and separate latrines for boys, girls and staff. In addition, a water source will be constructed where current access to this infrastructure is insufficient for all potential beneficiaries.

**Construction of Teachers' Houses.** Staff houses will be constructed by contractors in the six selected Balaka District sites (Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde) with locally available materials like sand to be provided by communities.

# 1.4 DESIGN DESCRIPTION

Save the Children (SC) Malawi, the cognizant Implementing Partner (IP) of AMAA, will hire Malawi Government construction companies certified with the National Construction Industry Council (NCIC) to carry out the construction using standard procurement processes. After satisfactory completion of construction as per specifications and drawings, the school will be officially handed over to the Ministry of Education, Science, and Technology (MoEST) who are the policy holders for education in Malawi.

The project will mobilize the community for critical pieces of school construction. Communities will be asked to make in-kind contributions, such as construction materials and labor, for the construction of teachers' houses to ensure that there is community ownership and sustainability in operation and maintenance after the project has phased out. Similarly, the community will be mobilized to safeguard the environment and children. Save the Children will use its Child Safeguarding Policy and Child Safeguarding Advisor to

sensitize communities on issues related to child protection. A Community Oversight Committee will be set up to provide feedback to Save the Children should contractors breach these standards.

Each CDSS, with two classrooms blocks and an administration room between each classroom block, a science classroom block, pit latrines and a standard a 100m x 50m football pitch, is planned to accommodate approximately 100 girls and 100 boys.

The designated construction contractors will be trained to follow SCI's child safeguarding policy that prohibits SC representatives from engaging in any activity that may result in any kind of child abuse. SCI's policy also ensures compliance with host country child welfare and protection legislation, i.e., Malawi's Child Care, Protection and Justice Act of 2010. In addition, the construction contractors are obliged to sign the Child Safeguarding Policy and Anti-Trafficking Policy prior to being awarded a contract. Throughout the lifetime of the project, the SCI construction team will monitor that the policy is being followed, making sure that children are not being employed in construction activities, that children are not abused, harassed or engaged in any sexual activities. The construction sites will be zoned for no entrance of the communities, particularly children, to protect them from any health hazards.

A registered Malawian structural engineering firm, L Gravam Consulting Services, was sub-contracted to review the CDSS drawings adopted from the Ministry of Education (see Annexes D and E). Minor amendments were made to the designs used for Machinga schools. The amended designs will be adopted for the Balaka schools. SCI construction team will recommend changes to improve structural integrity as needed (such as foundation design and incorporating drainage systems) depending on site conditions. SCI also will conduct site mapping and hire a local registered company to do geotechnical and hydrogeological survey of all the designated sites. The final output will be geotechnical and hydrogeological report for all the sites which will guide the AMAA construction team to design the foundations for all the sites as per site conditions to be stipulated in the reports. The revised designs will be used for tendering the construction works.

**School Design:** Preliminary designs for the classroom block were provided by MoEST and were created in 2008. Each classroom block is divided into two classrooms (~93m² each). The classrooms will include a chalkboard, space for four pin boards, twelve windows, and an administration room in between the two classrooms. Two four-hole latrine blocks (one for boys and one for girls) and a single two-hole latrine block for staff are included. Each of the two larger latrine blocks will include one stall designed for physically challenged users. The boy's latrine block will also include a urinal trough. Each latrine will also include one handwashing trough connected to a storage tank. The latrine block for girls is designed to have four equally-sized rooms for latrine pits and a privacy wall that blocks the view to each of the four rooms along with a menstrual hygiene management room. Water access will be provided via an AfriDev hand pump for only the site locations that do not have existing water supply system within a radius of 120m. See Annex C.

The preliminary laboratory will be a 17m x 12m one room building with mobile laboratory kits inside and a storage room enclosed with shelves for the laboratory equipment and chemicals. It will be used for demonstrating experiments in science subjects: Physical Science, Chemistry, Biology and Agriculture. The laboratory will not be connected to electricity and water supply but water may be sourced from the borehole to be drilled within the school premises.

**Teaching Housing Design:** Preliminary designs for the teachers' houses will have five room with a short (4.5m) corridor: two bedrooms (~13m² each), a kitchen (~14m²), and a lounge (~21m²). Bathrooms with a soak away pit and latrines will be constructed near the houses with one bathing stall and one latrine stall per each house. See Annex E.

<sup>&</sup>lt;sup>2</sup> Save the Children International Child Safeguarding Policy, 2016.

# 2.0 BASELINE SOCIO-ENVIRONMENTAL INFORMATION

#### SUMMARY OF GENERAL CONDITIONS IN MALAWI

## **HUMAN CONDITIONS**

Malawi has a growth rate of 3.3 percent with a 2016 estimated population of over 18.5 million. About 84 percent of the people live in rural communities and are engaged in agriculture. Two-thirds of the population is under 25 years of age. Life expectancy is 61 years. One-third of the population is from the Chewa ethnic group while the Lomwe, Yao, and Ngoni ethnicities combined make up nearly half of the population.<sup>3</sup>

Malawians have good access to improved drinking water sources as over 95 percent and 89 percent of Malawians in urban and rural communities, respectively, have access. Access to sanitation is more limited with about 47 percent and 40 percent for urban and rural communities, respectively. Malawi has a high degree of infectious diseases with HIV/AIDS prevalence over nine percent and malaria, dengue fever, diarrhea, hepatitis A, typhoid, and schistosomiasis being prevalent. In 2015, it was estimated that there was 1 physician per 50,000 inhabitants.<sup>4</sup>

Malawi's economy is reliant on agriculture, which contributes 90 percent of export revenues and 32 percent of the country's GDP. Most of these agricultural exports are related to tobacco. Other agricultural products of importance are sugarcane, cotton, tea, and corn. GDP per capita has been estimated to be stable for at least three years at \$1,100, whereas the inflation rate rose quickly during the flood season of 2015-2016, but slowed during 2016 due to the humanitarian response to an estimated 21.8 percent. Malawi ranks 170 out of 187 countries in the 2016 UN Development Program Human Development Index. About 41 percent of Malawians live in poverty.

Malawi is a source country for men, women, and children subjected to forced labor and sex trafficking. Most Malawian trafficking victims are exploited within the country, with victims generally transported from the southern part of the country to the central and northern regions. Children are subjected to forced labor in the agricultural sector (predominantly in the tobacco industry, but also on tea, coffee, and sugar plantations), goat and cattle herding, and brickmaking. Reports indicate one-third of Malawian children are involved in labor activities; most cases of child labor outside the family involve fraudulent recruitment and physical or sexual abuse, conditions indicative of forced labor. People with albinism are targeted for their body parts by those who believe that they contain magical powers and bring good luck. Women and children with albinism are particularly vulnerable to abductions and killings by criminal gangs, who see them as easy targets. The Government of Malawi does not fully comply with the minimum standards for the elimination of trafficking; however, it is making significant efforts to do so. In February 2015, the government passed anti-trafficking legislation, establishing a comprehensive legal framework to address trafficking in persons.

## GLOBAL CLIMATE CHANGE VULNERABILITIES

<sup>&</sup>lt;sup>3</sup> CIA World Factbook, Malawi.

<sup>&</sup>lt;sup>4</sup> <u>ibid.</u>

<sup>&</sup>lt;sup>5</sup> <u>ibid.</u>

<sup>&</sup>lt;sup>6</sup> USAID Food Assistance Factsheet – Malawi (https://www.usaid.gov/malawi/food-assistance)

<sup>&</sup>lt;sup>7</sup> US Department of Sate 2015 Trafficking in Persons Report – Malawi

<sup>&</sup>lt;sup>8</sup> US Department of Sate 2015 Trafficking in Persons Report – Malawi.

<sup>&</sup>lt;sup>9</sup> Amnesty International "We are not Animals to be Hunted or Sold": Violence and Discrimination against People with Albinism in Malawi, 2016.

<sup>&</sup>lt;sup>10</sup> US Department of Sate 2015 Trafficking in Persons Report – Malawi.

Climate variability and change are already affecting Malawi. Cycles of floods and droughts have increased in the last two decades, accompanied by an increased incidence of dry spells, intense rainfall events, and pest and disease outbreaks, as well as a poor inter-annual distribution of rainfall. Observational data indicate that the temperature has warmed by 0.9°C from 1960 to 2006, with an average rate of increase per decade of 0.21°C. Temperatures are expected to rise by one to three degrees Celsius by 2050. Wet season rainfall is increasing, but the onset of the season is trending later and likely to end earlier, which has implications for cropping seasons in a country where 90 percent of agriculture remains rain fed, smallholder activity practiced by the 85 percent of Malawians living in rural areas.

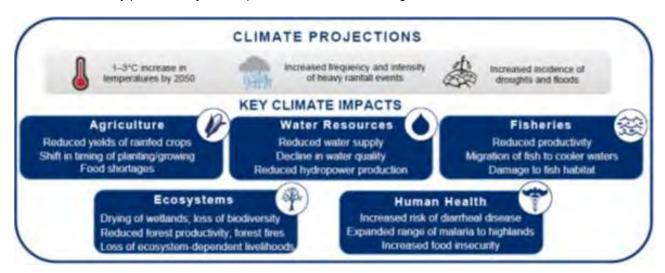


Figure 3. Climate Projections for Malawi from the USAID Climate Change Risk Profile for Malawi, January 2017

Two different models project that Malawi will experience a decreased number of rainfall episodes – possibly reduced by 15 to 20 percent – with significant increases in the intensity of each episode. <sup>12</sup> High emissions scenario models consistently predict an increasing percentage of rainfall occurring as extreme rain events. <sup>13</sup> This projected impact is occurring already in Mulanje, according to field staff of MOBILISE during interviews by the USAID Environmental Threats and Opportunities Assessment Team in 2012. Increased severity for precipitation extremes will have a measurable impact on agriculture, food security, soil erosion and water resources. <sup>14</sup>

#### WATER RESOURCES

Water resources and their status are vitally important in a country where surface waters (rivers and lakes) comprise 22 percent of the surface area. <sup>15</sup> The 2010 Government of Malawi (GOM) State of the Economy Report noted that Malawi was one of the most water-stressed countries in Africa with an estimated 403m<sup>3</sup> and 300m<sup>3</sup> of water available per capita in 2025 and 2035, respectively. <sup>16</sup> Many river basins in the country are under severe pressures due to deforestation, unsustainable agriculture, settlements, mining, industry,

<sup>&</sup>lt;sup>11</sup> C McSweeney, M New, G Lizcano, UNDP Climate change country profiles: Malawi, 2008.

<sup>&</sup>lt;sup>12</sup> Rocha, A., P. Melo-Gonçalves, C. Marques, J. Ferreira, and J.M. Castanheira. 2008. High-frequency precipitation changes in southeastern Africa due to anthropogenic forcing. *International Journal of Climatology* 28: 1239-1253. <sup>13</sup> C McSweeney, M New, G Lizcano, UNDP Climate change country profiles: Malawi, 2008.

<sup>14 ---</sup> The weekley, in the w, G Elzeano, OND1 Chinate change country profiles. Indiana, 2000.

<sup>&</sup>lt;sup>14</sup> USAID Malawi Environmental Threats and Opportunities Assessment, 2012 (ETOA 1202).

<sup>&</sup>lt;sup>15</sup> Environmental Affairs Department (EAD), 2010a: Malawi Fourth Country Report to the Convention on Biological Diversity (CBD). Lilongwe, Malawi: Ministry of Natural Resources, Energy and Environment.

<sup>&</sup>lt;sup>16</sup> Malawi Government, Ministry of Natural Resources, Energy, and Environment, Malawi State of Environment and Outlook Report: Environment for Sustainable Economic Growth, 2010.

commerce, tourism, and climate change. These activities have influenced changes in water quality especially due to sediment loads, industrial wastes, chemicals from agricultural lands, and the proliferation of aquatic vegetation. <sup>17</sup>

# LAND USES

Land in Malawi covers a total area of 94,080 km², representing about 80 percent of the total country's area. Land is an important component of Malawi's economy especially through agricultural sector and other land-related activities including natural resource harvesting. However, land uses in Malawi are determined by topography, policy, soil type, climate, and socio-cultural factors. <sup>18</sup> For example, 18 percent of the land in Malawi is in protected forests, infrastructure, settlements, and wildlife reserves while 82 percent has been left for other land uses including agriculture. <sup>19</sup> A 2010 map from LTS International shows the land uses in Malawi in Figure 4. <sup>20</sup>

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<sup>&</sup>lt;sup>17</sup> Laisi, E. 2010. Chapter 9: Water Resources, in EAD 2010b. Malawi State of Environment and Outlook: Environment for Sustainable Economic Growth. Lilongwe, Malawi: Ministry of Natural Resources, Energy and Environment.

<sup>&</sup>lt;sup>18</sup> Namthambwe, S., A. Safalaoh, and J. Chimphamba. 2010. Chapter 6: Land and Agriculture, in EAD 2010b. Malawi State of Environment and Outlook: Environment for Sustainable Economic Growth. Lilongwe, Malawi: Ministry of Natural Resources, Energy and Environment. (Namthambwe, S et.al. 2010)

<sup>&</sup>lt;sup>19</sup> USAID Environmental Threat and Opportunity Assessment for Malawi, 2012.

<sup>&</sup>lt;sup>20</sup> LTS International, Climate Smart Landscapes: An Assessment of Integrated Land Use Options in Malawi (http://www.ltsi.co.uk/malawi-land-use/dl/IALUO%20Task%205d%20Summary.pdf).

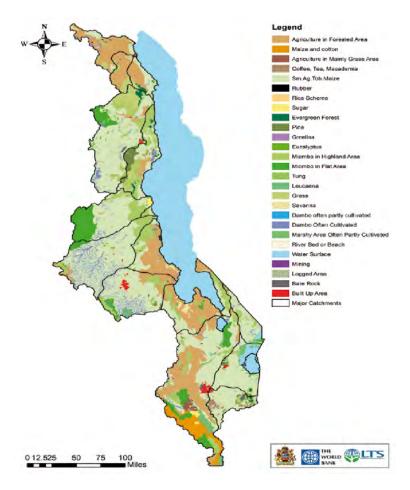


Figure 4. 2010 Land Use Map for Malawi – by LTS International in their report: Climate Smart Landscapes: An Assessment of Integrated Land Use Options in Malawi

Additionally, tenure over land is uncertain. Under the current tenure regime, land in Malawi is clustered into three categories: public, customary, and private. Public land is under the jurisdiction of the government and assigned for numerous uses, such as those pertaining to development. Private land can be possessed through freehold, leasehold, or certificate claim.<sup>21</sup> Customary laws govern customary land and in many cases traditional authorities (TAs) have sole jurisdiction to distribute and control land.<sup>22</sup> Smallholder farmers dominate customary land occupancy and use, which makes more than half of the land available in Malawi.<sup>23</sup>

# **BIODIVERSITY**

Per the Malawi Clearing-House Mechanism<sup>24</sup>, operated by the GOM Environmental Affairs Department,

<sup>&</sup>lt;sup>21</sup> National Statistical Office. 2008. The 2008 Population and Housing Census. Zomba, Malawi: National Statistical Office, and Namthambwe, S et.al. 2010 (NSO 2008).

<sup>&</sup>lt;sup>22</sup> Takane, T. 2007. Customary Land Tenure, Inheritance Rules, and Smallholder Farmers in Malawi. Institute of Developing Economies, Japan External Trade Organization. Namthambwe, S et.al. 2010, and Centre for Environmental Policy and Advocacy 2010. Assessment of Policy Implementation for Environment and Natural Resources in Malawi. Lilongwe: CEPA and Development Fund of Norway (CEPA 2010).

<sup>&</sup>lt;sup>23</sup> Namthambwe, S et.al. 2010, and CEPA 2010.

<sup>&</sup>lt;sup>24</sup> GOM Environmental Affairs Department's Malawi Clearing-House Mechanism – (http://www.chmmw.org/biodivmw.asp)

Malawi has approximately 1,000 species of fish representing 15% of the global diversity of freshwater fish. There are 140 species of reptiles, 74 species of amphibians, 188 species of mammals, and 648 species of birds. An estimated 6,000 species of plants exist in Malawi; however, the total number is unknown. Most of these species can be found in Malawi's protected areas that include: five national parks, four wildlife reserves, three botanical gardens, three nature sanctuaries, and over 60 forest reserves (including plantations) in Malawi. Across all species groups (e.g., mammals, fish, plants, birds, crustaceans, amphibians, and insects) approximately 200 species are endangered in Malawi. Over a quarter of the total surface area of Malawi are covered in aquatic ecosystems that include lakes, small water bodies, rivers, marshes, and swamps. The four largest lakes are Lake Malawi, Lake Malombe, Lake Chilwa, and Lake Chiuta. The main threats to Malawi's biodiversity are anthropogenic. Malawi's aquatic systems are at risk due to sediment loads, nutrient inputs, and contaminants, whereas terrestrial systems are at risk due to habitat encroachment from agriculture and deforestation.

#### Soils

Malawi's soils are classified into three major categories that take up 2/3 of Malawi's land area: Eutric Leptosols, Chromic Luvisols, and Haplic Lixisols. Eutric Leptosols are very shallow soils over hard rock that have effective base saturation. The soils in Balaka are likely to be Haplic Lixisols, and potentially Mopanosols. Haplic Lixisols are very weathered soils with low aggregate stability and high vulnerability to erosion, identified as loamy sand. Mopanosols are compacted, sandy loam alkaline soils also vulnerable to erosion and are found in Mopane Woodlands (sparse open-tree savannah). Happing Malawi's land area: Eutric Leptosols are very shallow soils over hard rock that have effective base saturation. The soils in Balaka are likely to be Haplic Lixisols, and potentially Mopanosols. And potentially depends on the soils also vulnerable to erosion and are found in Mopane Woodlands (sparse open-tree savannah).

# 2.1 LOCATIONS AFFECTED AND ENVIRONMENTAL CONTEXT (ENVIRONMENT, PHYSICAL, CLIMATE, SOCIAL)

#### SUMMARY OF CONDITIONS IN BALAKA DISTRICT

Balaka District is located in the Southern Region of the Republic of Malawi. It is bordered by Ntcheu District to the northwest, Mangochi District to the north and Machinga District to the east, Zomba District to the south east, Blantyre District to the south and Neno District to the south west. The district headquarters is 201 km from Lilongwe, the capital city of Malawi, and about 127 km from Blantyre, the main commercial center in the country.

The district covers an area of 2,193 square kilometers representing 2.4 percent of the total land area of Malawi. It is the 20<sup>th</sup> largest district in the country and the seventh largest in the Southern Region. Balaka District is located at latitude 14<sup>o</sup> 59°15.38"S longitude 34<sup>o</sup> 57° 22.23"E (See map 1 below, figure 5).

<sup>&</sup>lt;sup>25</sup> Food and Agriculture Organization (FAO), World Reference Base for Soil Resources, 2015 Update.

<sup>&</sup>lt;sup>26</sup> FAO World Soil Resources 94, 2001: Lecture notes on the major soils of the world.

<sup>&</sup>lt;sup>27</sup> Milington A and Townsend J, Biomass Assessment, Mopane Woodlands section, 1989.

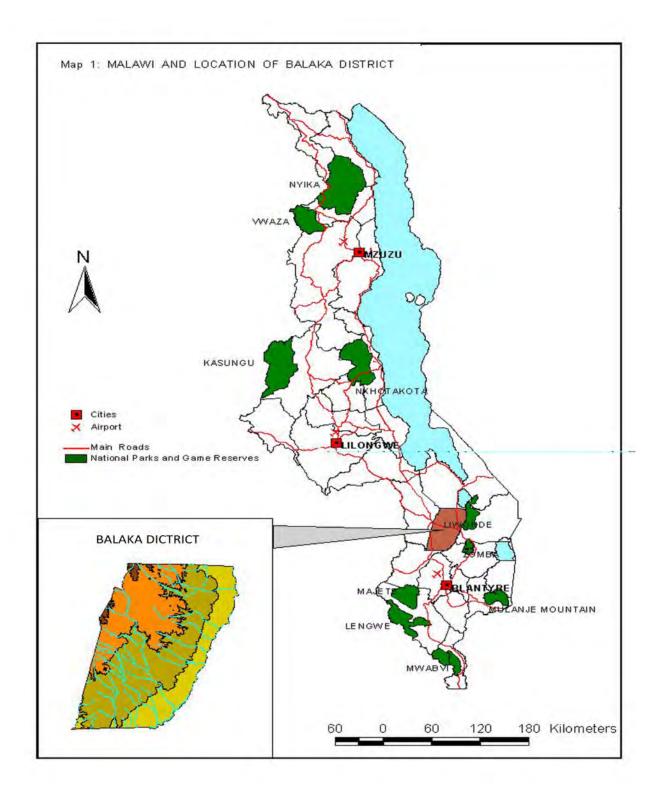


Figure 5. Location of Balaka within Malawi

# TOPOGRAPHY, GEOLOGY AND HYDROLOGY

Balaka District is on the eastern edge of the Great Rift Valley, hence has a varied topography ranging from an elevation of about 350 to 800 meters above sea level. The topographical features in the district comprise of ridges and natural drainage systems.

The most conspicuous and dominant physical feature of the district are the plateaus with isolated hills found around the district. Most of the rivers/streams are seasonal. These natural drainage channels are narrow with steep slopes

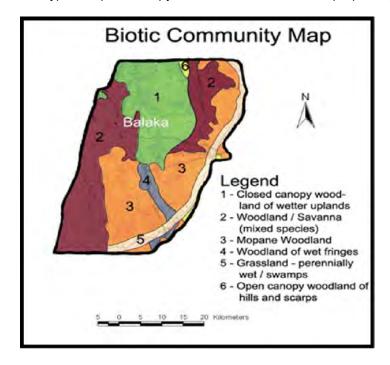
#### **HYDROLOGY**

Water resources in Balaka District include surface and ground water. Surface water consists of rivers and streams, while ground water sources include springs, boreholes and shallow wells. Although Balaka District does not have a dam, the district takes advantage of Mpira dam located in Ntcheu District. Major rivers in the district are: Shire, Rivirivi, Chimwalire, Nkasi, Lisungwi, Naliswe, Mulunguzi, Mzimundilinde and Kalambo. Groundwater resources at Dziwe located to the south east of Balaka boma, comprises a low yielding weathered basement aquifer of the plateau area. This means that generally Balaka has insufficient groundwater resources.

Population pressure and poor land husbandry practices have degraded catchment areas and marginal lands and accelerated soil erosion, resulting in sedimentation problems in the rivers. Dry spells and floods are direct indicators of this problem. Inadequate sanitary facilities, agrochemical run-off, and lack of proper waste disposal facilities contribute to the deterioration of the quality of water resources, through direct and indirect pollution.

#### VEGETATION

The district has three main types of vegetation which are Closed Canopy Woodland, Woodland/Savannah (mixed species) and Mopane Woodland. Other small areas are covered with perennial wet grassland (Shire Valley) and Open Canopy Woodland of hills and scarps (See fig below).



## Fig 6. Balaka Biotic community Map

#### Soil

The district is made up of different types of soils. The soils available in the district include alluvial soils; often calcimorphic, lithosols, mopanosols, gleys, and ferruginous soils. There is medium textured sandy soil along the Shire River, sandy loam to clay sandy soils with medium textures in the upper Balaka plain and heavy textured sandy medium and shallow stone soils in part of the upper Ulongwe and Bazale. Phalula is characterized by gravel and loams soils while Utale has generally sandy loams, clay sands, and sandy soils with medium texture. The types, fertility levels and characteristics of the soils determine land use and classification and these are discussed in later chapters

#### CLIMATE AND CLIMATE CHANGE

#### TYPES OF CLIMATIC ZONES

Balaka district experiences two distinct seasons. There is a cool dry season that runs from June to August and a rainy season from October to April. May and September are transitional months. The average annual rainfall for the district is 750 mm. The onset of rains occurs most frequently toward the end October, but effective rains for planting crops are mostly received mid-December. The best time for rain-fed agricultural production is between December and March when soils are moist.

The district generally experiences a hot to warm climate with a mean annual temperature of 25 degrees Celsius. The highest temperatures are experienced in areas close to the Shire River. The lowest temperatures in the district are normally experienced in June and July while the highest temperatures are registered in October and November.

#### **TEMPERATURE**

Balaka being in the Great Rift Valley experiences varied climatic changes. Temperatures range from 19 to 38 degrees Celsius with an annual average revolving around 25 degrees Celsius.

# **CLIMATIC CHANGE**

Globally, there has been a change in weather patterns over a long period of time. The factors that have contributed to climate change include ozone layer depletion and global warming. In Africa, climate change has resulted into climate variation resulting into various disasters including droughts, floods, windstorms and desertification resulting in famine and food insecurity.

The effects of climate change have not spared Malawi and Balaka District as a whole. In Balaka, this is evidenced by, among other things, the change in rainfall pattern resulting in dry spells, flash floods and windstorms in different parts of the district. Rainfall amounts and rainfall days varied in each of the extension planning areas (EPAs) in Balaka across the four year period from 2012 to 2016 (Figure 1-5). The mean rainfall for the district over this four-year period was 541mm/annum, which was below the national average over the same period of time. Ulongwe received the highest amount (737mm/annum) seconded by Bazale (664mm). Utale and Phalula receive the least amount rainfall of 448 and 451mm and the number of rainfall days of 69 and 52 days respectively. On the other hand, Bazale, Mpilisi and Ulongwe experienced long rainy seasons and would be ideal for crops which mature relatively late. Utale and Phalula are rain shadow areas and generally not suitable for most crops except drought tolerant varieties.

Balaka District experienced downward trends in both rainfall amount and number of rainfall days with 2013/14 receiving the highest amount followed by a significant drop in the 2014/15 and 2015/16 seasons. The number of rainfall days have also been constantly decreasing from 127 days/ season in the 2012/13 season to 68 days per season during the 2015/16 season. This trend threatens the sustainability of the agricultural sector as well as other sectors, hence the need for concerted efforts toward addressing the causes. One of the expected outcomes in the agricultural sector, according to the Third Malawi Growth and

Development Strategy (MGDS III), is to increase agricultural production and productivity, as such strategies devised to avert the downward trends of productivity of major crops in Balaka will be contributing towards achieving the aspirations of MGDS III. Communities are aware of the basic issues on climate change but there is need to intensify the adaptation and mitigation measures such as conservation agriculture, catchment are management and proper crop and livestock production practices. There is also a need to promote and disseminate information for early warning, preparedness, response and recovery to disaster. This is in line with goal number one of the MGDS III, which calls for improved weather and climate monitoring, prediction, information and knowledge management systems.

# Vulnerability to Natural disasters

Balaka District is prone to various disasters. Participatory vulnerability analysis with the communities ranked the following disasters in order of importance and frequency: dry spell, floods, windstorms and migratory pest outbreak. Since 2000, the incidences of disasters have become more frequent with far reaching impacts on the population, economy and environment.

## Dry spells

Prolonged dry spells affect all Traditional Authorities in the district but are very severe in Phalula, Chanthunya, Nkaya, Amidu, Sawali and Nsamala. About 95 percent of the total population is at risk of suffering during dry spells each year in the district (Balaka DRM Plan, 2016). These result in food insecurity, inadequate availability of productive pasture for animal foraging and water scarcity. Due to land degradation, the high dependency on rain-fed agriculture and inadequate crop diversification, people's vulnerability to impacts of dry spells in the district is very high. There is a great increase in the number of people affected by dry spells. Figure 5.6 above shows the number of households affected by dry spells over the past five years. In 2012/2013 there were no dry spells

# **Floods**

In Balaka the TAs that are mostly affected by floods are Nkaya, Kalembo, Amidu and Kachenga. In 2014-2015 rainy season, approximately over 15 percent of the population in district was displaced due to floods. In the year 2014/15, Amidu and Kachenga were the most affected with approximately 27 and 20 percent populations displaced respectively (2014/15 Disaster Assessment Report, 2015). In 2011/2012 and 2015/2016 Balaka experienced no floods. Most flooding rivers are Nkasi, Shire, Rivirivi and Mulunguzi. The overflowing of these rivers and other streams negatively impact people's lives by destroying houses, property, crops as well as some people losing their lives. Damage to public infrastructure also occurs due to floods.

#### Stormy Rains

Traditional Authorities Phalula, Chanthunya, Amidu and Sawali are severely affected by stormy rains in the district because of high rate of deforestation. About 8% of the total population is at risk of stormy rains in the district each year (Disaster Office 2016). The most severe storms occur at the beginning and at the end of the rainy season resulting in loss of life, property and crops as well as damage to infrastructure. Deforestation and poorly designed infrastructure increase the likelihood of damage. The magnitude and frequency of stormy rains is increasing each year in the district.

#### **Human Safety Concerns**

Cholera is present in Balaka District even if there are no current outbreaks. In December 2015, Balaka had a cholera outbreak that was responded to quickly by UNICEF.<sup>28</sup>

Human trafficking of albino body parts, for the sex trade, and for indentured workers occurs in Machinga, the district bordering Balaka District. Amnesty International documented several cases of trafficking in human body parts from albinos in recent years. <sup>29</sup> Upon consultation with communities around the proposed AMAA CDSS sites during the USAID/GEMS site visits 5-9 June 2017, each community reported that human trafficking was not an issue. Each community separately identified the same area in the district that was known for trafficking that was not in proximity to the proposed AMAA CDSS sites.

Earthquakes, floods, drought, strong winds, hailstorms, and landslides are natural disasters that have afflicted Balaka District in recent decades.

#### 2.2 FOREST RESERVES AND WILDLIFE

Balaka district has a total forest area of approximately 5671.2 hectares representing 2.35 % of the total land area. The most dominant tree species in hilly and flat areas are *Brachystegia spp*, and *Cholospermum Mopane* respectively. These forests exist in degraded hills, graveyards and along the river banks. There are also a number of introduced species in the district such as *Eucalyptus spp*, *Grilicidia Sepium*, *Sena siamea*, *Sena spectabililis* and *Gmeline aborea* in woodlots, homesteads as well as in people's farms. The economic development and livelihood of the people of Balaka are dependent on natural resources and for the district to attain sustainable economic growth and alleviate poverty; it must conserve its valuable environmental resource such as water, land, plants and animals. Otherwise unsustainable utilization will have negative effects on people's livelihoods.

Fuelwood supplies 94.1% of the total energy demand (NSO, 2015) in the district. The supply of such wood is dwindling at alarming rates. The wood people use come from dying forests, which are forests composed of juvenile trees which are cut before they reproduce and release seed in soil. In this case the forest areas are continually being deprived of soil seed bank that would form the next forest crop. The consequences of this will be disastrous in terms of energy needs. Forests serve as the major source of timber and poles, and non-wood products such as thatch grass, construction ropes, reeds, game meat, and mushrooms. Forestry products are raw material for small scale industries such as carpentry in the district. Forests provide habitat to a wide range of animal species. Degradation of forest resources will eventually deprive such organisms of their homes and will lead to extinction of species, which will affect tourism development. Forests also play a significant role in conserving water and moderating climate as explained earlier.

#### 2.2.1 PRODUCTION FORESTS AND TREE PLANTATIONS

The district does not have any gazetted forest reserves or tree plantations. The reason is that previously the district was under the administration of Machinga district and the delinking resulted in the district having no forest reserves as all the reserves fell within the boundaries of the current Machinga district. It would be difficult now to designate an area into Government forest reserves since most of the land has been allocated to individuals or clans and the policy of the forestry department is promotion of community ownership of customary forests, which is in line with the current devolution policy. The department assists villages in establishing forest areas and developing management options for these areas. Currently there are management plans. The main management practices are; protecting the regenerants and planting and protecting trees. 230 Village Forest Areas (VFAs) are as shown in **Table 3-1** below.

<sup>&</sup>lt;sup>28</sup> UNICEF Malawi Humanitarian Situation Report, Report No. 1, 2016.

<sup>&</sup>lt;sup>29</sup> Amnesty International "We are not Animals to be Hunted or Sold": Violence and Discrimination against People with Albinism in Malawi, 2016.

Table 3-1: Village forest areas and woodlots in Balaka district

TA	# Survey ed	Ha surveye d	# not Surveye d	Total #.	Indigenou s VFAs	Exotic VFAs	Mixture
Nsamal	16	106.84	4	20	14	-	6
а							
Nkaya	22	155.9	35	57	7	21	6
Chanth unya	20	31.88	8	28	4	9	15
Sawali	26	45.9	29	55	12	1	42
Phalula	11	44.0	1	12	4	1	7
Amidu	3	150.6	10	23	23	0	0
Kachen ga	8	17.0	1	9	0	0	9
Kalemb	24	236.26	0	24	12	0	12
0							
Others	0	0	2	2	2	0	0
Totals	130	788.38	90	230	78	32	97

Source: District Forestry Office

Nkaya and Sawali traditional authorities (TAs) have the highest number of VFAs (57 and 55 VFAs respectively), which generally comprise a mixture of exotic and indigenous tree species. However, fewer VFAs have been found in TAs Nkaya (39%) and Sawali (47%). This might be due to capacity challenges to manage a large number of VFAs amongst the forestry assistants. As such, attempts to upscale and outscale the establishment and management of VFAs need to consider human capacity in the specific areas. TA Kalembo registered the highest surveyed area under VFAs of 236 ha seconded by Nkaya at 156ha. Overall, the district has 61% of the established VFAs, surveyed and this represent an area of 789ha. Slightly more than half (52%) of the established VFAs are planted with a mixture of indigenous and exotic trees, while only 14% of the mix includes exotic tree species only

As the forestry policy advocates, the management of these Village Forest Areas is entrusted with the local communities themselves through the Village Natural Resources Management Committee (VNRMCs) shown in **Table 3-2**.

Table 3-2: Village Natural Resources Management Committees by TA/STA

Traditional Authority	# of VNRMCs	# of VNRMCs trained	# of VNRMCs with constitution	# of functional VNRMCs
Amidu	18	8	8	8
Chanthunya	12	12	12	9
Kachenga	7	7	7	7
Kalembo	6	4	4	4
Nkaya	7	4	4	4
Nsamala	18	8	8	8
Phalula	10	7	6	7

Sawali	2	2	1	1
Total	80	52	50	48

Source: District Forestry Office

VNRMCs play an important role in planting and management of trees in the district (**Figure 3-1**). In 2013, 2014, 2015 and 2016, VNRMCs planted 50%, 88%, 73% and 90% of the trees planted in the district. The VNRMCs, therefore offer an opportunity for targeting reforestation initiatives in the district.

The common tree species that have been planted during the period in question are: Khaya anthotheca, Albizzia lebbeck, Melia azederach, Eucalyptus specie, and Senna siamea, Msangu, Mthethe, Mpakasa and Thombozi.

## 2.2.2 CONDITION OF FORESTS

The conditions of forests are very poor due to cutting cut for charcoal production, destruction by wild bush fires, lime making and land clearing for agriculture and settlement.

The rate of deforestation is very high in the district estimated at 4.4% per annum as compared to national figure of 3.7 %(Department of forestry), 2014.

However, Malawi Growth Development Strategy III promotes participatory implementation of environment, natural resources and climate change management programmes requiring collaborative effort of Government, Non-Governmental Organizations and communities.

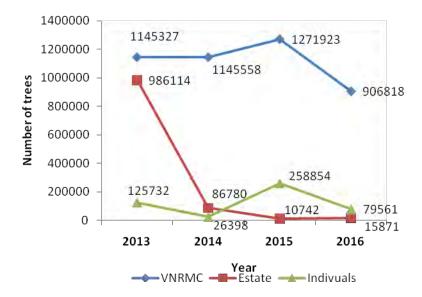


Figure 7: Trend of tree planting amongst VNRMCs, estate and individuals.

Source: District Forestry Office

#### 2.2.3 KEY FORESTRY ISSUES AND THEIR TRENDS

Forestry land is dramatically being cleared for agriculture and settlement. As population increases, the demand for more land for agriculture and settlement increases. In 1973, forestry land encompassed around 100,000ha. This was reduced by approximately 50% by 1991 before reaching less than 5,000ha in 2010. In 2016, forestry land comprised only 3.43% of the total area. On the other hand, 93.03% of the total land area for Balaka was opened up for agriculture and settlement by 2016. These trends are worrisome in a district characterized by high growth rate.

Containing population growth would be an option for the district to avert its alarming rate of deforestation. Although some effort was initiated to promote tree planting and management, the current rate of loss of area under forest suggest that the efforts are far from achieving balance. Another shortfall is that the district put more emphasis on tree planting, while overlooking management of planted trees to ensure a high survival rate of established trees. This is manifested by lack of data on survival rates of planted trees.

#### 2.2.4 OWNERSHIP AND MANAGEMENT OF WOODLOTS

Woodlots are owned by communities that are adjacent to forests. Each woodlot is manned by any member of the community while management is conducted communally. For example slashing and weeding are some of the managerial activities that are done communally.

## 2.2.5 COMMON TREE SPECIES IN THE WOODLOTS

Most woodlots in the district have both exotic and indigenous tree species and the most common of these tree species are: Eucalyptus species, Faldhebia albida, Khaya anthotheca, Grilicidia sepium, Alfezelia quazensis, and Albizzia lebbeck.

#### AQUATIC AND MARINE RESOURCES.

The major rivers in Balaka are Shire, Mpale, Mkasi, Mwaye, Nkhonde, Liwawadzi, Rivirivi, Lisungwi, Mulunguzi, Tsimuke and Mziza. Shire is the largest river and forms part of the boundary between Balaka and Machinga and Balaka and Zomba in the east. The sources of Mkasi and Mwaye rivers are the mountainous uplands of Chilipa whereas Mtuwandembo Hill is the source of Mpale River. These two rivers pass through TA Kalembo area and flow into Shire River. Nkhonde and Liwawadzi rivers have their catchments in the hills of Ntcheu district which lie to the north west of Balaka and the rivers pass through STA Kachenga down to the Shire River. Rivirivi River has its source in Ntcheu district and passes through the center of Balaka District and empties its waters into the Shire River. Mulunguzi, Tsimuke and Mziza rivers started at Kankawo hill in TA Chanthunya and sub TA Phalula. The soils are fragile and easily washed away during flooding causing the river bank to widen

In order to minimise soil erosion, silting and drying up of rivers, the district needs to priorities river bank conservation through planting of soil and water conserving trees and enforce adherence to standards for limiting cultivation near river banks.

# 2.3 ENVIRONMENTALLY CRITICAL AREAS.

There are a number of environmental issues of great concern in the district due to the increase in population that creates a pressure on the use of natural resources. Some of them include; soil and land degradation, water pollution and degradation of water quality, deforestation and poor waste management.

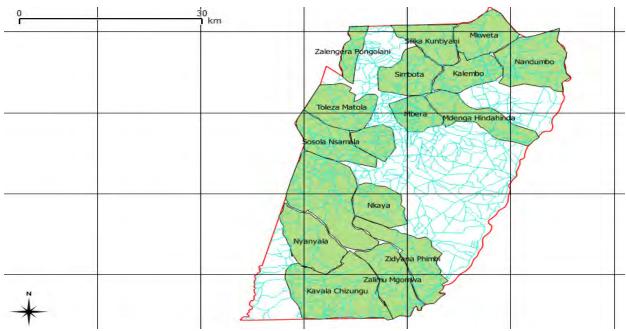


Figure 8: Map of Balaka showing Environmental degraded area.

## 2.3.1 SOIL AND LAND DEGRADATION

Fertile oil is a resource facing great pressure in the district. Balaka is characterized by medium textured sand loamy soils along the Shire River and Utale which are prone to soil erosion and fertility loss. This results in river silting, particularly the Shire River hence impacting the sectors like fisheries, agriculture and energy which are important in supporting the livelihoods of not only Balaka District but also the nation. The 2014 UNDP- Poverty-Environmental Initiative study found that the average national soil erosion rate was 29 tons per hectare per year. Although the data to show trends of soil erosion is not readily available at district level, the increasing sediment loads in the rivers and reservoirs provide the evidence of increasing rates of soil erosion at all levels.

# **Construction Sites**

None of the potential sites (Chilanga, Namichere, Makanjira, Njerenje, Namikombe and Mzimundilinde) have any foreseen significant environmental impacts from construction activities that cannot be mitigated. The most likely environmental situations requiring mitigation measures are: 1) potential for erosion; 2) potentially high water tables; and 3) availability of trees on site which will have to be cut to create room for construction. Common factors across the three sites include: 1) good and clear air quality, 2) lack of electricity, 3) lack of potential wildlife conflict, 4) no reported human trafficking, 5) waste management practices are simply hand-dug pits where trash is burned, 6) teacher housing will be located within the CDSS sited property, and 7) construction workers will have housing available (for rent) in each community.



Figure 9. Planned Chilanga construction site

The Chilanga construction site (~62,500m however 20,000m² will be used for the purposes of this construction) s in the northeast central part of the district and does not border any protected areas (14°58'46.01"S 35°10'0.1"E). The closest river is one kilometer km from the site, it has an estimated cross section of 6\*0.4 by the time of visit. The site is about 200m from the main road. The nearest health center is a private clinic called Namanolo approximately 10km from the site, whereas a government health center is 25km away in Balaka Township .The school borders a main community road and is approximately 500m from the main part of the village. There are 3 compounds nearby northwest of the plot and a church that is 10 m from the site. The nearest primary school is at 2km from the site.

The site is has a mixture of flat and hilly sections, the flat section is used as football playground while hilly sections are not in use and have shrubs and trees. Apart from the football playground, the land is typically not in use. In an elevated portion of the site, there is a dilapidated and abandoned house. The area has the following types of trees: Naphini (*Terminalia serecea*), Mphakasa (*Lonchcarpus capassa*), Nsangu (*Faidherbia albida*), and other types of trees (diameter range from 10-40cm) are scattered within the property. The soil is loamy and rocky.

As the site is rocky, there are no hand-dug wells or boreholes adjacent to or on the property that are ¬3-4m deep in the dry season and that are full during the rainy season. The nearest latrines belong to the church and are 3m from the site, with an estimated depth of 3 m deep. The water table seems to low estimated at approximately seven meter depth.

In May 2018, SCI conducted land tenure discussions with the communities of the potential schools to confirm that there are no significant land tenure problems and that the land has no substantial encumbrances. During these land tenure discussions, it was discovered that a few community members, relatives of the land owner have claimed that a portion of the proposed plot does not belong to the

chief/land donor. At the time of the discussion, it was agreed that part of the hilly area will not be used for construction purposes. However, the owner of the land reported that this area was earmarked for construction of a school. As such, despite the fact that the hilly portion of land will not be used for AMAA school construction, it was still included as part of the land provided for the project and can be used for future expansion (e.g., building teachers' houses, additional school blocks, etc. in future years). The landowner reported that this be a condition that should be applied for all the land surveyed. The need for a secondary school is very high in the area and the community is willing to make sacrifices for the sake of the community (see Annex G).





Figure 10. Chilanga construction site – erosion protection wall. 1km from the site

Figure 10. Chilanga construction site – sand source

Potential local materials to be used for construction are gravel and sand. Gravel will be sourced on site. Four sand sources were identified. These sources are mostly from seasonal rivers. The sand sources identified are tabulated below. Treated timber will be sourced from a licensed supplier in Blantyre. Construction routing will be along the main road.

Table 4: Sand Sources at Chilanga

Name of Source	Distance from site	GPS Coordinates
Nangalamo River	2.5Km	S14°59.771', E35°10.260'
Malaya River	7.5Km	S15e00.429', E035.09.542'
Nanjiri River	4.2Km	S14 <sup>e</sup> 57.002', E035.11.768'
Chilanga River	1Km	S14 <sup>e</sup> 58.717', E035.18.135'



Figure 11. The White polygon defines the current boundary of the proposed Chilanga CDSS site.

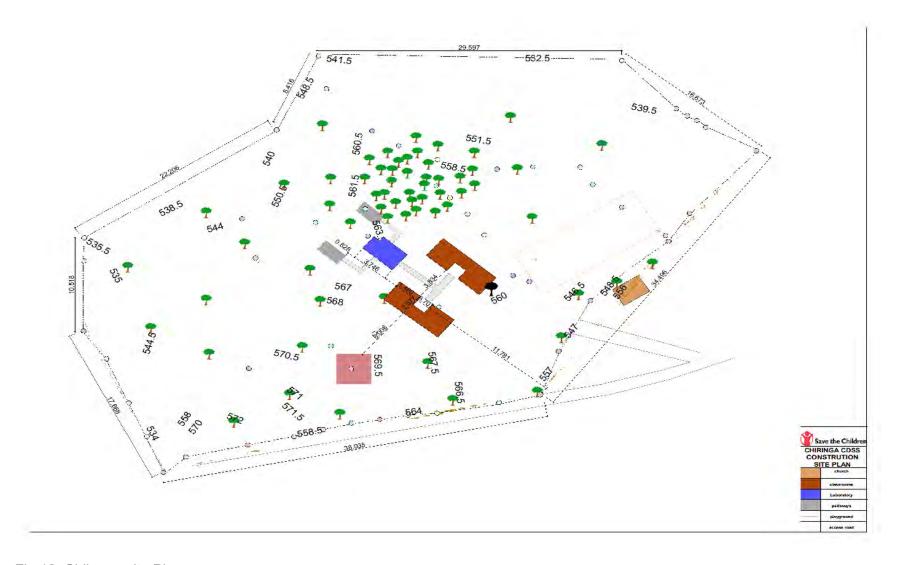


Fig 12. Chilanga site Plan

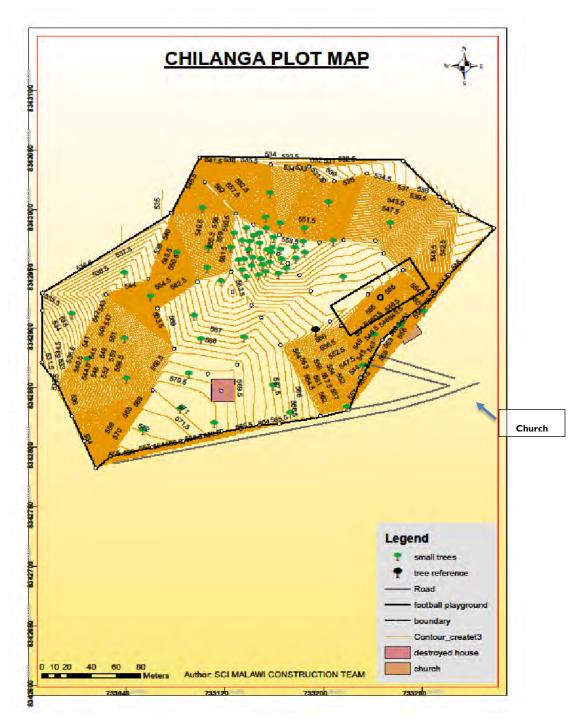


Figure 13 Chilanga Site Map

# 2. Namichere Site

The proposed Namichere construction site (~14,942m²) is in the central east part of the district, 3km from the Shire River, the river, which gets its water from Lake Malawi. The nearest protected forest is at 3 km from the site and is called Demeter, and the nearest health center is Kwitanda Hospital. Construction routing will occur along the main road which passes through the site splitting it into two parts, with a quarter of the area on one side of the road and three quarters of the area on the other side of the road. The nearest primary school is located approximately 40 m from the site. The central part of the community is less than 200m away. There are five residential houses bordering the site and a church that is approximately 50 m from the site and includes a nursery school building.



Fig 14: Proposed Namichere construction site



Figure 15 Namichere – this 4m wide road divides the plot into two sections.

This site's land is generally flat with a 3-4% slope (see contour map). Several ant hills are found along the border of the plot along with one abandoned and destroyed house wall built in mud block. The soil is sandy loamy.



Figure 16. Planned Namichere construction site - partial brick wall located near boundary of site.

A borehole that is at least 45m deep is located 30m away and belongs to the primary school. The water table is estimated to be at 5m depth. The nearest latrines are approximately 15m from the site and belong to the surrounding compounds residential compounds. Latrine depths are at approximately 4m.





Fig. 17. Namichere CDSS site- water source/ Shire River.

Fig. 18. Namichere CDSS site- sand source (8323966.12; 733410.76).

Local materials to be used for construction are gravel and sand. Gravel will be sourced from a designated site called Phiri la Dothi (land of soil) approximately15km from the site. Four sand sources have been identified for construction purposes. The sources are all from seasonal rivers as tabulated in the table below:

Table 5. Sand sources at Namichere site

Name of Source	Distance from site	GPS Coordinates
Namichere River	2.2KM	S15°08.395', E035°10.570'
Nsambazi River	1.1Km	S15e08.963', E035e10.326'
Mfelanjobvu River	1Km	S15e08.890', E035e10.755'
Namichimba	0,8Km	S15°08.830', E035°09.559'

In May 2018, SCI conducted land tenure discussions with the communities of the potential schools to confirm that there are no significant land tenure problems, or that the land has no substantial encumbrances. During these land tenure discussions at Namichere it was confirmed that the land belongs to the community and they freely donated the land. See Annex F for a copy of the land agreement.

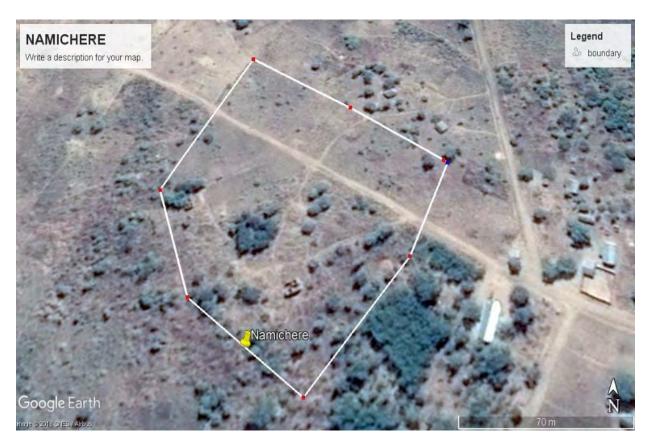


Figure 19. The white polygon the boundary of the proposed CDSS sit at Namichere.

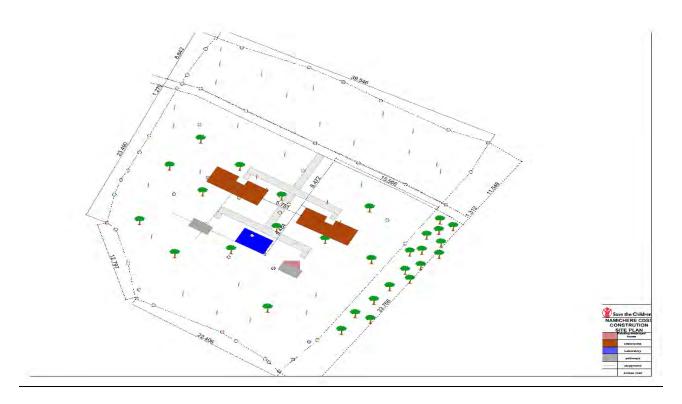


Figure 20. Namichere Site Plan

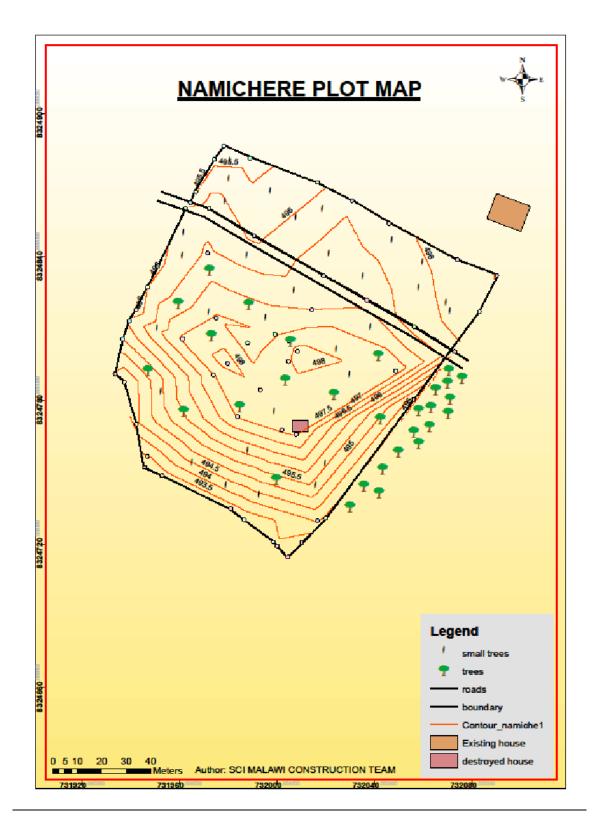


Figure 21 Namichere Site Map

# 3. Namikombe Site

The proposed Namikombe construction site (~21,411m²) is located near the central west edge of Balaka District and does not border any protected areas (15°5'27.6"S 35°59'4.1"E). The nearest health services are within 15km, Kankao health center and Namikombe clinic is 2km from the site. The existing primary school is located across the main road approximately 100m away from the site. The nearest compound is 20m away. There are two compounds (of two to three buildings each) one of them belongs to the primary school.



Figure 22Proposed Namikombe construction site.



Figure 23. Namikombe construction site – one fourth of the plot is used for farming.

The site's land is generally flat but sags in the middle with a difference in level of one meter. The sagging area fills with flowing water during the rainy season. Part of the land is currently being farmed for tomato and cassava. Many type of trees including Mpasa, Mlonde, India, Chongwe, Masawu, Chulu, Chinama, Mhinyankhinangwa, Mphingo and Mpoza are scattered in the plot with diameters ranging between 10cm and 40cm. The remainder of the land surface is covered by dense shrubs. The land is covered with black cotton soils.

A borehole is located on-site and is approximately 40m in depth. The nearest primary school is approximately 100m away. The nearest latrine is at 10 m away and belongs to a nearby residence. The latrine depth is estimated to be 3m. The nearest surface water body, a year-round river, is 9km away, Rivrivi River at an elevation greater than 3m below the proposed construction site. The water table at site is unknown but estimated, based on elevation, distance to surface water, and depth of adjacent borehole, to be high at approximately 4m.



Figure 24. Namikombe construction site - Borehole at the site.

Local materials to be used are gravel and sand. Gravel will be sourced from 11km away at (8334828.23, 708183.22) and four sand sources have been identified for use from seasonal rivers as tabulated in the table below. Construction routing will be along the main road. Treated timber will be purchased from a licensed company in Blantyre.



Fig 25. Namikombe construction site- water source-Rivirivi River.

Fig 26. Namikombe construction site- one sand source- Rivirivi River.

Table 6: Sand sources at Namikombe site

Name of Source	Distance from site	GPS Coordinates
Rivirivi River	9Km	8337797.11, 713569.73
Mulunguzi River		8329805.52, 710283.11
Namikombe River	2.5Km	S15e06.457', E034e59.627'
Chete River	3,8Km	S15°05.928', E034°57.409'

In May 2018, SCI conducted land tenure discussions with the communities of the potential schools to confirm that there are no significant land tenure problems, or that the land has no substantial encumbrances. During these land tenure discussions at Namikombe in May 2018, it was confirmed that there are no land tenure issues and land agreements were signed after the discussion (see signed forms in Annex G). The PAP was allocated with land of equal value and size and she reported to be satisfied with the land that was offered in exchange of the donated land (see form attached).



Figure 27. The white polygon defines the boundary of the current Namikombe proposed CDSS site.

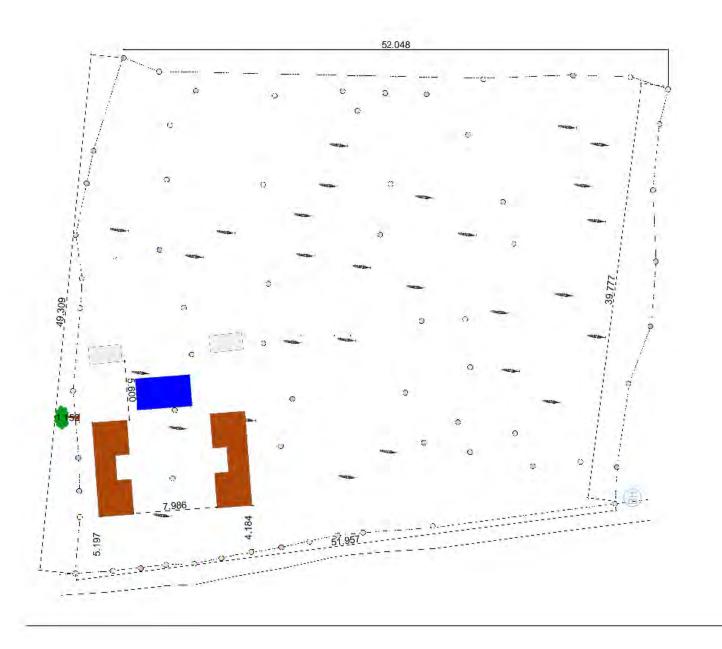


Figure 28. Namikombe Site Plan

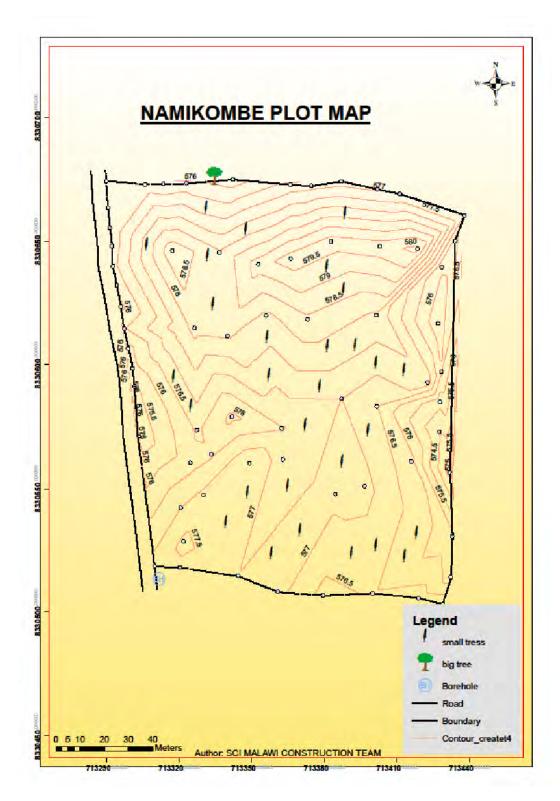


Figure 29. Namikombe Site Map

# 4. Makanjira Site

The proposed Makanjira construction site (~11,361m²) (15°3'25"S 35°2'9"E) is located near the center of Balaka District and does not border any protected areas apart from a reserved forest approximately 5 km from the site called Mpinga. The nearest health post is Kwitanda Health Post approximately 5km away. An existing primary school is located approximately 3 km away from the site. The nearest compound is approximately 100m away and a Jehovah's Witness church is approximately 30m from the site. The site has no adjacent residential compounds and is a natural woodlot for which the communities said the land was reserved for developmental activities within their area. Because the land is a natural woodlot the IP consulted the Forestry Department at Balaka District Council with regards to the proposed construction works at this site. The Forestry provided a go ahead for the same (see attached letter in Annex N) .The communities have been advised to replace the trees which will be cut by planting other seedlings within the area. The community have committed to replace the lost vegetation cover (as per attached letter in Annex P).The IP in conjunction with the Department of Forestry at Balaka District Council will monitor that the tree cover is replaced as a result of the trees that will be cut due to the construction works.



Figure 30 Proposed Makanjira construction site.



Figure 31 Makanjira construction site. The road is approximately 7m wide.

The site's land is a flat land with an access 7m earth road bouldering the site. Currently the site is not in use and has dense vegetation, whereby at each  $100m^2$  there is a minimum of 21 different types of trees of 30-50 cm diameter, they are different types of trees some of which are Terminilla serica (Naphini), Combretum species (Nkhuthe), Dalbergia melanoxylon (Phingo), Combretum zeyheri (Chinama) and many more and the rest surface is covered by dense shrubs (refer to Annex K for common trees in this area). The soil is loam. A borehole is located approximately 300m from the site; its estimated depth is approximately 45m in depth. The nearest primary school is 100m away. The nearest latrine is at 100 m away and is located on a nearby residential compound. The latrine depth is estimated to be 4 m. The nearest surface water body, is the Rivirivi River approximately 4km away. The water table at site is unknown but is estimated, based on elevation, and the depth of the nearest pit latrine to be at approximately 5m.

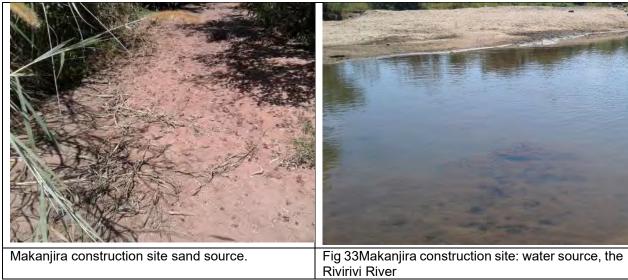


Figure 32. Namikombe construction site - Borehole at the site.

Local materials to be used are gravel and sand. Gravel will be sourced from 11km away at (8334828.23, 708183.22) and sand will be obtained from 5 sand sources mainly seasonal rivers as tabulated in Table 6 Construction routing will be along the main road. Treated Timber will be purchased from a licensed company in Blantyre.

Table 6. Sand sources at Makanjira site

Name of Source	Distance from site	GPS Coordinates
Rivirivi River	4Km	8337797.11, 713569.73
Mulunguzi River		8329805.52, 710283.11
Ngonamo River	8.1Km	S15°06.117', E035°02.513'
Map River	3.0Km	S15°03.786', E035°01.505'
Kankhwesi River	1.2Km	S15°02.816', E035°01.245'

In May 2018, SCI conducted land tenure discussions with the communities of the potential schools to confirm that there are no significant land tenure problems, or that the land has no substantial encumbrances. It was found that the land offered belongs to a clan and the members of the clan were requested to provide a written consent approving the use of this land for construction of a CDSS. The written consent was provided and signed by all concerned members of the Clan (see Annex L). During these land tenure discussions at Makanjira in May 2018, it was confirmed that there are no land tenure issue and land agreements were signed after the discussion.



Fig 34. Makanjira Site

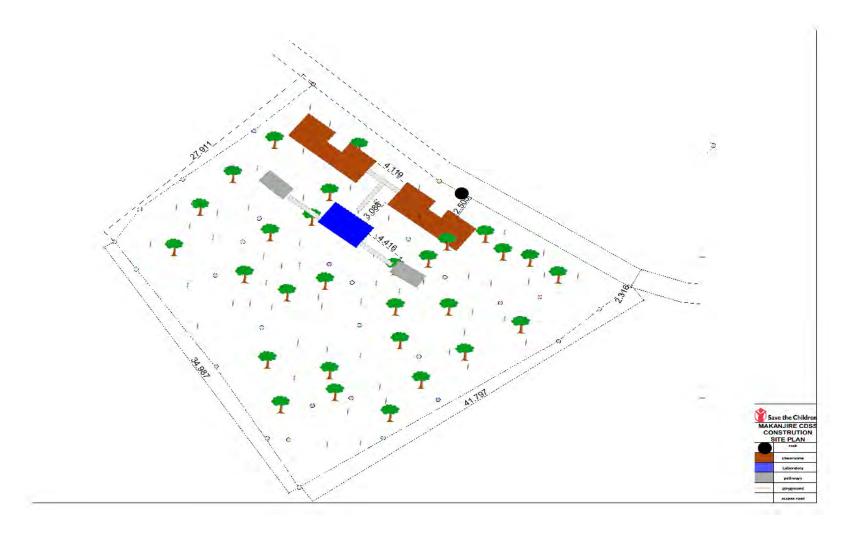


Fig 35: Makanjira Site Plan

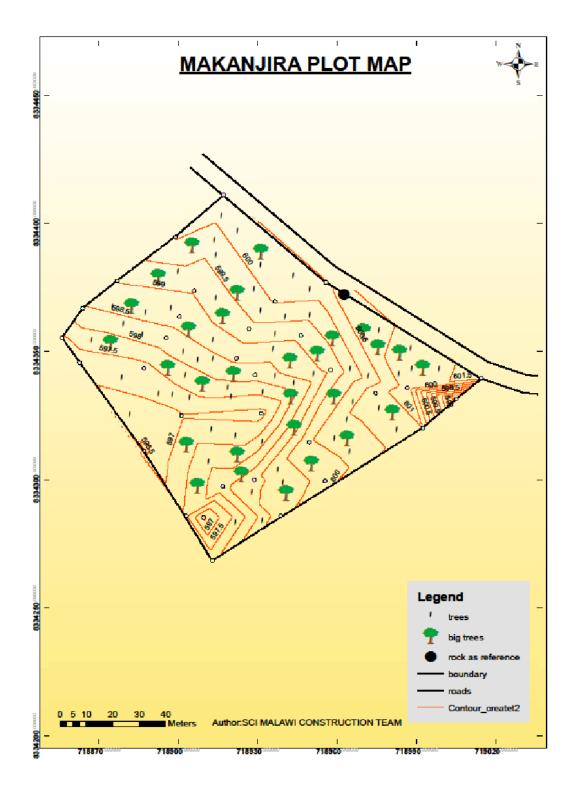


Fig 36. Njerenje Site Map

# 5. Njerenje Site

Figure 37 Planned Njerenje construction site

The proposed Njerenje construction site (~19,534m²) is located near the southeast edge of Balaka District and does not border any protected areas (15°15'6.7"S 35°3'59"E), the nearest health center is Utale approximately 12km from the site. An existing primary school is located 300m away from the site. The nearest compound is 15m away. There are five compounds and a maize mill approximately 100m away.



Figure 38. Njerenje construction site – road of 6m wide

The site's land is flat with dense shrubs averaging 1.5m high and four big trees ranging between 20 and 60cm in diameter (see Annex M for common trees on this site). The land is currently not in use. The soil is clay. The communities have been instructed to ensure that the tree cover that will be lost as a result of the construction activities will be replaced and the IP in conjunction with the Forestry Department at Balaka

District Council will monitor this throughout the life of the project. The communities have also committed to replant the lost trees (see the attached letter in Annex O).

A borehole is located approximately 30m from the site and is approximately 18m deep. The nearby primary school is 300m way. The nearest latrine is 15 m away and belongs to a nearby residence. The latrine depth is estimated to be 3m. The nearest surface water body, is the Shire River approximately 8km away at 15° 15′57″ 35°6′41″ The water table at site is unknown but is likely to be 4m.

Local materials to be used are gravel and sand. Gravel will be sourced from 9 km away and sand will be sourced from 4 seasonal rivers as tabulated in the table below. Construction routing will be along the main road. Treated timber will be purchased from a licensed company in Blantyre.

Table 7. Sand sources at Njerenje site

Name of Source	Distance from site	GPS Coordinates
Muthe River	18.5km	S15°07.662', E035°01.795'
Mulunguzi River	5.1Km	8329805.52, 710283.11
Msimuke River	15.3Km	S15e15.462', E034e56.540'
Mvumbi River	6.1Km	S15e09.380', E035e02.470'

In May 2018, SCI conducted land tenure discussions with the communities of the potential schools to confirm that there are no significant land tenure problems, or that the land has no substantial encumbrances. During these land tenure discussions at Njerenje in May 2018, it was confirmed that there are no land tenure issues and land agreements were signed after the discussion.



Figure 39. Njerenje construction site – google earth.

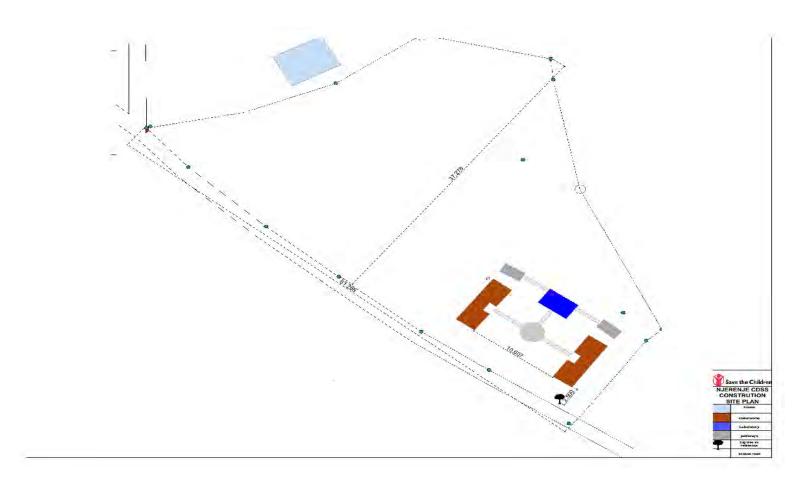


Figure 40. Njerenje construction site – site map.

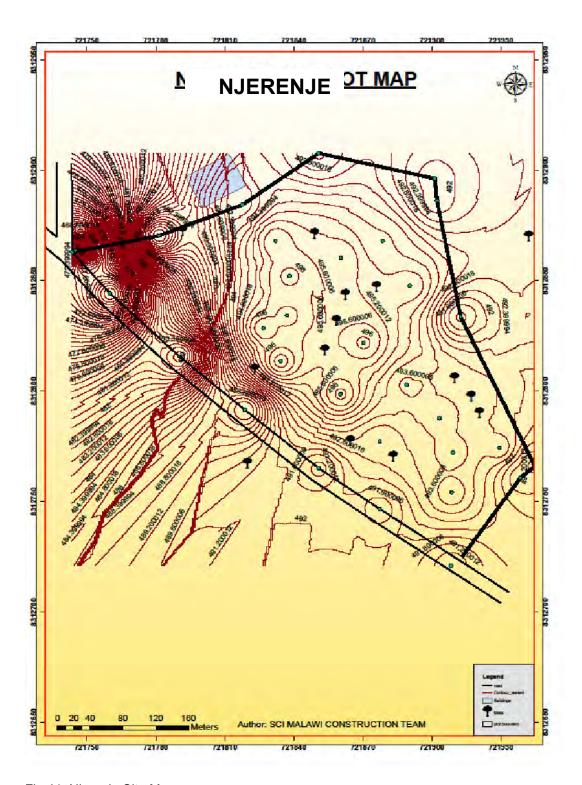


Fig 41: Njerenje Site Map



Figure 42 Proposed Mzimundilinde construction site.

The proposed Mzimundilinde construction site (~17,074m²) is located in the central north of Balaka District and does not border any protected areas (35.137948, -14.913659). The nearest health posts are within 20km, Mbera; Ulongwe, Kalembo and Nandumbo health centers. The existing primary school is adjacent to the plot. The nearest compound is at 300m away. There are two compounds around the site, one of them is the house of head teacher of the primary school and the other is a church under construction.

The nearest latrine is 30 m away and belongs to the residence near the site. The latrine depth is estimated to be 5 m. The community uses damps as sources of water as show in the pictures below. There no nearby river in the dry season. The water table at site is unknown but seems to be very low.

The site's land is flat on the high side close to access road and slopes at the lower side as you move away from the road. The land is not currently in use, shrubs and different types of trees (including Mango, Mpakasa, Mgwemba, Mparankanga, Kweranyani, and Matovu) all of 10-15cm diameter cover the land. The soil is sandy loam.



Figure 43. Mzimundilinde construction site – shrubs.

Local materials to be used are gravel and sand. Gravel will be sourced from the site and sand from 4 seasonal rivers as tabulated below: water from damps at -14.914084, 35.126844. Treated timber will be purchased from a licensed company in Blantyre.



Fig 44. Mzimundilinde construction site- water source-Rivirivi River.

Fig 45. Mzimundilinde construction site- sand source-Mfuleni river

Table 8 Sand sources at Mzimundilinde site

Name of Source	Distance from site	GPS Coordinates
Mfuleni River	8Km	S14.93.44; E35.18.414
Mpilisi River	4.4Km	S14°56.140', E035°09.031'
Nkonokono River	1.8Km	S14°55.203', E035°07.771'
Mwai River	3.6Km	S14°52.321', E035°10.377'

In June 2018, SCI with Ministry of Education, Science and Technology colleagues conducted land tenure discussions with this community to confirm that there are no significant land tenure problems and that the land has no substantial encumbrances. During these land tenure discussions at Mzimundilinde on June 19th, 2018, it was confirmed that land has no tenure issues and the agreement form was signed as attached.



Figure 46. The proposed Mzimundilinde construction site boundary defined by the white polygon

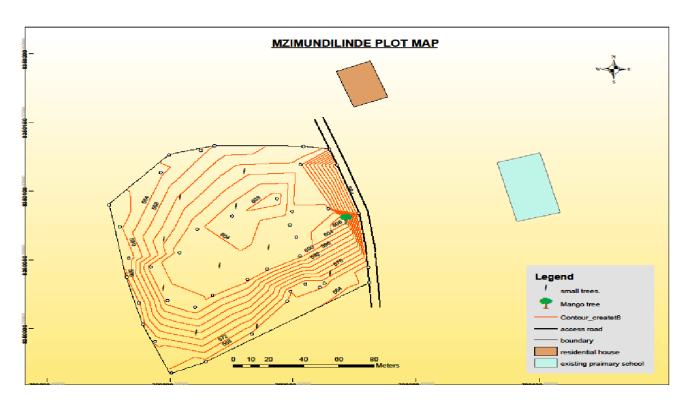


Fig 47. Mzimundilinde site map

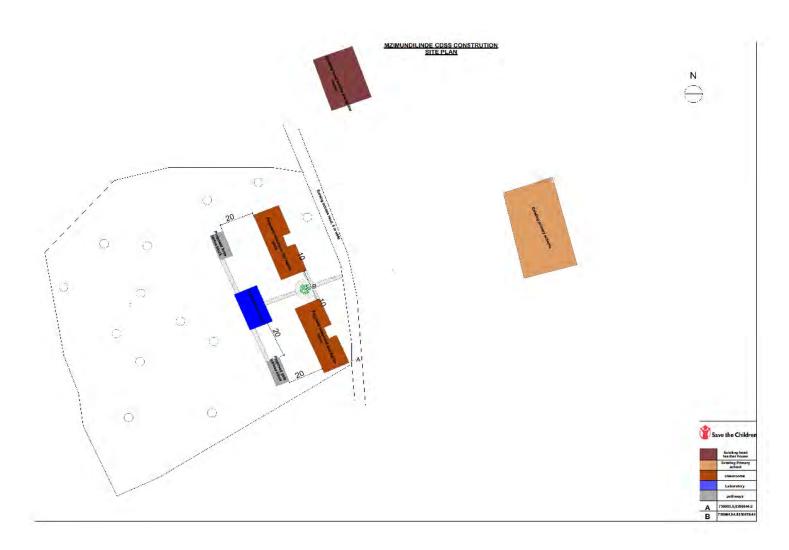


fig 48. Mzimundilinde site plan

# 2.2 APPLICABLE AND APPROPRIATE PARTNER COUNTRY AND OTHER INTERNATIONAL STANDARDS (E.G. WHO), ENVIRONMENTAL AND SOCIAL LAWS, POLICIES, AND REGULATIONS

**Environmental Assessment.** Chapter III (13) (d) of the Malawian Constitution states, "The State shall actively promote the welfare and development of the people of Malawi by progressively adopting and implementing policies and legislation aimed at achieving the following goals:

To manage the environment responsibly to: 1) prevent the degradation of the environment; provide a healthy living and working environment for the people of Malawi; 2) accord full recognition to the rights of future generations by means of environmental protection and the sustainable development of natural resources; and 3) conserve and enhance the biological diversity of Malawi."

Part II section 3 (2) of the Environment Management Act (EMA) of 1996 provides for the protection and management of the environment and the conservation and sustainable utilization of natural resources in Malawi; section 5 (1) gives every Malawian a right to a clean and healthy environment. Part V section 24 states the need for Environmental Impact Assessment (EIA) Audit and Monitoring. Under this section, the Minister of Natural Resources, Energy and Environment is mandated to specify the types and sizes of projects which shall not be implemented unless an EIA is carried out.

Part V of the EMA delegates management of the EIA process to the Director of the Environmental Affairs Department (EAD) and outline all steps that must be followed before implementing any project. EIA guidelines to implement Part V of the EMA were put in place in December 1997. Found in the SADC Environmental Legislation Handbook of 2012, as prescribed under section 24(1) of the EMA, the types of projects for which an EIA is mandatory are provided in List A (Annex F). School construction does not merit a mandatory EIA. List B furnishes a list of types of projects that may necessitate an EIA, under which all infrastructure projects fall. The EMA states under Section 24-2 that "a developer shall, before implementing any project for which an environmental impact assessment is required under subsection (1), submit to the Director [of EAD], a Project Brief ...". This language is unclear regarding whether a Project Brief is required to be sent to the Director as the AMAA project does not meet the criteria for a mandatory EIA.

The EMA also specifies that any project subject to EIA requirements cannot be licensed and implemented until a satisfactory EIA study has been completed and the project has been approved by the Director of EAD. As an EIA is therefore a statutory requirement in Malawi and the EMA provides for penalties for non-compliance, SCI and USAID/Malawi must submit a Project Brief to the EAD as the EAD has overall responsibility for ensuring that EIAs are carried out for all relevant projects in accordance with national standards.

Water Resources Management. The Water Resources Act (WRA) of 2013, Part IX – Government Waterworks – Section 105, defines a community project as a) connected with the use of water or the drainage of land situated entirely or for the most part, within a given area, or b) classified by the National Water Resources Authority (NWRA), with the approval of the Minister, as community purposes. State schemes are defined as a) the use for any public purpose (being for the distribution and allocation of water among the beneficiaries of the scheme) of the whole or part of a water resource. It is likely the AMAA project will be viewed by the NWRA as a community project; therefore, under Section 108, the NWRA will only issue a license to abstract and use water for a community project if: a) the proposed project is approved by the persons owning or occupying at least two-thirds of the particular area concerned in the project; and b) provisions are made by the project for any adequate alternative supply of water to be supplied to permit holders likely adversely affected and unable to benefit from the scheme.

The World Health Organization has standards and recommendations for water quality.<sup>30</sup> Standards of particular importance include Fecal Coliforms (any presence is unacceptable) and Arsenic (threshold of 10µg/l).

The US Environmental Protection Agency (EPA) sets primary and secondary limits. Pertinent limits include: zero for fecal coliforms or *E. coli*, less than five percent of samples with total coliforms (noting that if less than 40 samples in a month, only one sample is allowed to show any total coliforms), 500 mg/l Total Dissolved Solids, and 5 NTU Turbidity. Additional thresholds for contaminants that may be of concern can be found in the USEPA's guidelines.<sup>31, 32</sup>

**Waste Management.** Sections 37 – 40 of part VII of the EMA describes Waste Management, Licenses for waste, Importation and exportation of hazardous waste and Classification of pesticides and hazardous substances. These sections may have implications for the disposal of construction waste, requiring a license to handle, store, transport, classify or destroy waste other than domestic waste, or operate a waste disposal site, or the disposal of municipal waste, stating that each town is responsible for municipal waste disposal. Meaning the local authorities have control over how the project is to dispose of municipal solid waste within the community and that the project will need a license to destroy or transport construction waste from Ministry of Natural Resources, Energy and Environment. To satisfy the requirements of the EMA, SCI and USAID/Malawi must apply for a license to generate and manage construction waste to the Director of the EAD as the EAD has the authority to issue such licenses on behalf of the Minister of Natural Resources, Energy, and Environment.

Land Tenure and Resource Rights<sup>33</sup>. In 1995, the GOM undertook ambitious efforts toward land reform that led to the passage of the National Land Policy in 2002. The policy calls for the redistribution of land from large estates to smallholders, formalization of customary tenure to address tenure insecurity, and creation of a commission to review and revise existing land legislation. Some elements of the land reform program have shown positive results in pilot programs. The Land Law of 2016 implementing the 2002 Land Policy has been enacted, but the pace of reform has been slower than desired.

As USAID/Malawi proposes supporting the construction of schools in rural and peri-urban Malawi, it is important to understand the issue of ownership of the land where the schools are to be located. Per Save the Children/Malawi, the authority to construct schools on designated land at the sites of Njerenje, Mzimundilinde, Namichere, and Chilanga communities was given by village elders, in some cases decades ago (see Annex H). Ownership prior to allocation to the schools is unknown. In Malawi, compensation in this situation is unusual, and it is important to manage expectations around land transfer. However, some of the land upon which the schools will be sited are used for farming. Communication and consultation processes must be clear. USAID also conducted consultations and key informant interviews in June 2018 to clarify land tenure rights in communities. The only site where the land issues were not clear was at Namikombe where the PAP had not yet been allocated land in exchange for the land she gave out. SCI verified later that she had been allocated land of similar size and equal in value and that she reported to be satisfied with the land allocated to her in exchange of the land she donated for the construction works (refer to signed land tenure forms in Annex G.)

The focus of the inquiry on displacement and compensation issues should be on legitimate landholders, including secondary or informal occupants and users of the land. This is consistent with good practices found in the World Bank Operational Policy 4.12, the Voluntary Guidelines on Responsible Governance of Tenure, and USAID's Guidelines on Compulsory Displacement and Resettlement. "Ownership" and tenure type is only part of this analysis; another key aspect is determining who is currently using the land in a way

<sup>&</sup>lt;sup>30</sup> WHO Guidelines for Drinking-water Quality, 2017.

<sup>&</sup>lt;sup>31</sup> US Environmental Protection Agency, Drinking Water Regulations and Contaminants (https://www.epa.gov/dwregdev/drinking-water-regulations-and-contaminants). <sup>32</sup> ibid.

<sup>&</sup>lt;sup>33</sup> USAID Country Profile: Property Rights and Resource Governance, Malawi, 2016.

considered legitimate by the local community. The preferred means of compensation, if called for, is comparable land (see Annex H for a description of Compensation and Land Issues in Malawian Schools Project).

# 3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL RISK

#### **PROJECT ACTIVITIES**

The following AMAA project activities were analyzed as to the environmental risk they pose to the locations in which activities are planned to be implemented.

- Construction of new structures (secondary schools, dormitory, teacher housing, latrines);
- Construction or rehabilitation of small-scale water and sanitation (WASH) infrastructure, including protection of existing water sources. This may include boreholes, bath houses, , soak away pits, WASH stations, and latrines:
- Capacity-building for equipment/system maintenance; and,
- Acquisition of land for construction of the secondary schools.

#### 3.1 POTENTIAL ENVIRONMENTAL IMPACTS FROM CONSTRUCTING SCHOOL BUILDINGS

Construction activities have the potential to cause both direct and indirect adverse impacts on the environment. Adverse impacts of construction projects that must be considered under this IEE include:

#### DAMAGE DUE TO CONSTRUCTION TO SENSITIVE OR VALUABLE ECOSYSTEMS

Construction or extraction of building materials in or near wetlands, estuaries or other sensitive ecosystems may destroy or significantly damage exceptional natural resources and the benefits they provide. Damage may reduce economic productivity, impair essential ecosystem services (such as flood control or breeding habitat for fish), or degrade the recreational value of these resources. Activities occurring near sensitive ecosystems with wildlife may induce human/wildlife conflicts. Compaction of the soil and grading of the site may alter drainage patterns and water tables, changing access to water by animals, people and vegetation, and may degrade water resources as well. Improper extraction of construction materials such as wood, stone, gravel, or clay may damage terrestrial ecosystems (e.g., wood may come from relatively undegraded forests).

#### ADVERSE IMPACTS OF MATERIALS SOURCING

Construction requires a set of materials often procured locally: timber, fill, sand and gravel, bricks. Unmanaged extraction of these materials can have adverse effects on the environment. For example, streambed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems and purchase of timber from unmanaged or illegal concessions helps drive deforestation. While implementing partners (IPs) generally have direct control over their general contractors (GCs), construction materials are often procured by GCs from sub-vendors. In the case of timber, the sub-vendors are often at the end of a long and untraceable supply chain. This separation from source both limits the actions that IPs can take to assure environmentally-responsible sourcing of these materials and reduces IP responsibility for these impacts. However, IPs can and should undertake reasonable due diligence to assure that they do not bear direct responsibility for adverse impacts, and to reduce indirect impacts so far as feasible.

#### DAMAGE TO THE ENVIRONMENT DUE TO UNRESTRICTED CONSTRUCTION WORKER USAGE OF NATURAL RESOURCES

Workers brought in from communities far from the construction site will increase the pressure on local natural resources to accommodate their lifestyle while participating in construction activities. Such

pressures include using more charcoal or wood for cooking, demanding bushmeat as supplemental protein, and hunting bushmeat for additional income.

#### SEDIMENTATION OF SURFACE WATERS

Removal of natural land cover, excavation, extraction of construction materials, and other construction-related activities can result in soil erosion. Erosion, in turn, can lead to sedimentation in receiving waters. Sedimentation may reduce capacity of ponds and reservoirs, increasing flood potential, or substantially alter aquatic ecosystems by changing streambed, lakebed, and estuary conditions.

#### CONTAMINATION OF GROUND AND SURFACE WATER SUPPLIES

Toxic materials are often used in construction. Examples include solvents, paints, vehicle maintenance fluids (e.g., oil, coolant) and diesel fuel. If these are dumped on the ground or wash into streams they may contaminate ground or surface water supplies. This may harm the health of the local community, as well as populations living down gradient and downstream. Aquatic and terrestrial ecosystems may also be damaged. Where sanitary facilities for construction crews are inadequate, human waste may contaminate water resources.

#### **ADVERSE SOCIAL IMPACTS**

Construction may displace local inhabitants, or reduce their access to environmental resources. (For example, farmers' income or subsistence may be reduced.) Construction on or near culturally important sites (cemeteries, worshipping areas, meeting places) may generate conflict with the local community. If the new facility provides a valuable service not available elsewhere (e.g., schools, healthcare facilities, potable water sources and other infrastructure), it may cause migration to the area. If local labor is not used, this may also generate resentment as unemployment is a challenge in most rural communities and adding people into a community can increase market prices for the duration of construction. Noise and dust from the site may disturb surrounding inhabitants.

#### SPREAD OF DISEASE

An influx of construction workers from other regions may introduce new diseases to the local population or increase the incidence of local infection. This is a particular concern with sexually transmitted diseases, such as HIV/AIDS. Specific types of facilities such as those for healthcare, sanitation, and solid waste can also increase the spread of a variety of diseases unless they follow proper waste-handling procedures. In addition, the spread of disease from insect vectors breeding in flooded and abandoned quarries and borrow pits (areas from which construction materials were excavated, or "borrowed") can negatively impact the health of surrounding populations.

#### **EXACERBATING HUMAN TRAFFICKING CONDITIONS**

The trafficking of people for sex, labor, or body parts occurs across the world. An influx of temporary migrant construction workers to a new area can introduce new linkages in the trafficking trade or increase the demand for trafficked persons during construction activities.

# WORKER / COMMUNITY SAFETY

Typical health and safety risks to construction workers include falls, injury from falling objects, crush injuries from collapses and heavy equipment, flying debris, dust inhalation, extreme heat stress brought on by high temperatures and humidity, speeding vehicle accidents, and exposures to toxic materials including solvents, cement dust, lead, and asbestos. Occupational injuries can permanently deprive construction workers of the ability to earn and livelihood and are often fatal. Community members can be exposed to

the same risks as workers if the construction site does not exclude all non-construction personnel. Community members are also at risk when construction waste is not confined to the construction site.

#### DISPOSITION OF CONSTRUCTION DEBRIS

As described above, improper disposal of liquid and solid construction wastes can damage sensitive ecosystems, contaminate ground and surface water supplies, adversely impact adjacent populations and contribute to the spread of disease.

#### **DEGRADATION OF AIR QUALITY**

Potential degradation of air quality on site during construction can occur because of exhaust from combustion engines and dust from land clearing, excavation, traffic movement on unpaved roads and exposure of bare soil and earth piles to wind. This can negatively impact worker and community member health if appropriate mitigation measures are not implemented.

#### NOISE POLLUTION

During construction activities, noise may be caused by the operation of demolition, earth moving and excavation machines, generators, concrete mixers and cranes. The increased noise level can negatively impact construction workers if appropriate worker safety measures are not implemented. Noise pollution can also be a disturbance to community members, disrupting cultural practices (e.g., community meetings, weddings, funerals, rites of passage, etc.), impeding business (e.g., market sellers' negotiations), or inhibiting classroom instruction.

#### DAMAGE TO AESTHETICS OF SITE/AREA

If the structure is too large, the architectural style is not consistent with local architectural customs, or it is sited without adequate attention to existing aesthetic and scenic characteristics, the facility may harm the visual quality of the area.

# **WORKER SANITATION**

During construction, potential outbreak of disease can occur due to a lack of adequate sanitary facilities. This can negatively impact workers' health if appropriate mitigation measures are not implemented.

#### 3.2 POTENTIAL ENVIRONMENTAL IMPACTS FROM WATER AND SANITATION PROVISION

Schools and dormitories need water and sanitation infrastructure due to the number of people they host daily. In general, well-executed water and sanitation interventions bring substantial health and environmental benefits. However, for many activities, active efforts are required to prevent unintended adverse impacts that can offset or negate these benefits:

#### INCREASED MORBIDITY AND MORTALITY

Water supply and sanitation projects may cause increased incidence of infectious water-borne diseases such as cholera, non-infectious disease such as arsenic poisoning, and water-enabled diseases such as malaria, schistosomiasis or bilharzia. Poor design, operation and/or maintenance of water supply improvements can lead to pools of stagnant water near water taps, water pipes and storage tanks. Improper or ineffective practices for disposing of excreta and solid waste can exacerbate this problem. Stagnant water pools form an excellent breeding place for disease vectors (mosquitoes that carry malaria, etc.). They can also increase transmission of water-related diseases, especially when the wet spots are clogged or contaminated with solid waste or excreta.

- Contamination of surface and groundwater supplies with infectious organisms from human excreta is especially serious. Contamination may be caused by poorly designed, operated, or maintained sanitation facilities.
- Infectious diseases may also be spread by improper use of wastewater to grow food crops.
- Failure to test new sources of water, especially groundwater, for possible natural or industrial chemical contaminants, such as arsenic, mercury, fluoride and nitrate, can lead to serious health problems.

#### **DEGRADATION OF ECOSYSTEMS**

Adverse impacts to ecosystems can arise from water diversion, construction or decommissioning activities in or near a watercourse, or from fecal contamination of water. Numerous impacts on ecosystems are possible such as:

- Construction of facilities in sensitive areas (wetlands, estuaries, etc.) can destroy flora or fauna or their habitats, leading to loss of biodiversity, reduction of economic productivity and loss of aesthetics and recreational value.
- Improperly designed water-supply projects can also deplete fresh water, erode soil from pipe leakage, or create poor drainage at taps. Increased consumption of water can reduce water flows and cause loss of habitat, wetlands and wildlife downstream. Soil erosion may cause sedimentation in receiving waters, which may reduce the capacity of ponds and reservoirs, increase flooding, or substantially alter aquatic ecosystems by changing streambed, lakebed and estuary conditions.
- Contamination of receiving waters with human excreta or animal manure can cause nutrient
  enrichment, depletion of dissolved oxygen and other changes that disturb natural ecosystems and
  reduce the vigor, abundance, and/or diversity of plants and animals that live in water or on land.
  Disease-causing microorganisms from excreta and manure may also contaminate fish or shellfish,
  creating health hazards.

#### FRESH WATER RESOURCES DEPLETED

Depletion of fresh water sources can occur when projects do not adequately assess the quantity of available surface and groundwater (including typical seasonal and annual variations) when extracting water for construction activities or overdrawing water during project operations. Water availability is the accessibility to quantified sources of water with known regeneration rates in comparison to the amount of water needed from that source over time. These assessments need to consider future changes in temperature and rainfall due to climate change. Other causes include poor mechanisms for regulating withdrawals and use of water, and insufficient monitoring and maintenance of leaks.

- Depletion of surface water sources damages aquatic life, reduces economic productivity, diminishes downstream use, and curtails recreational possibilities.
- Overdrawing wells and boreholes can alter groundwater flows or reduce groundwater levels
  potentially leading to loss of drinking water sources locally or in downstream or down-hill locations.
  These losses of source water availability and quality may lead to increased costs if alternative
  supplies need to be located or if additional treatment is required. Aquifer depletion and falling water
  tables can also lead to land subsidence (i.e., sinking of the land's surface).

Both situations increase the cost of future water supply systems. Increased population densities and the lack of facilities can increase the impact in peri-urban areas. In addition, depletion of water resources may lead to poorer water quality, health impacts, and elevated costs of potable water supplies in downstream or down-hill locations.

# 3.3 POTENTIAL ENVIRONMENTAL IMPACTS FROM WASTE MANAGEMENT ACTIVITIES

The typical municipal solid waste stream at a school will contain general municipal solid wastes (organics, plastics, and recyclables). Improper waste management activities can have the following environmental impacts:

#### INCREASED DISEASE TRANSMISSION / HEIGHTENED THREAT TO PUBLIC HEALTH

Rotting organic materials pose great public health risks, including, as mentioned above, serving as breeding grounds for disease vectors such as rats and flies. Waste handlers and waste pickers are especially vulnerable and may also become vectors, contracting and transmitting diseases when human or animal excreta or medical / hygienic wastes are in the waste stream. Risks of poisoning, cancer, birth defects, and other ailments are also high.

#### **AIR POLLUTANTS CREATED**

Garbage is often burned in residential areas and in landfills to reduce volume. Burning creates thick smoke that contains carbon monoxide, soot and nitrogen oxide, all of which are hazardous to human health and degrade air quality. In addition, burned plastics can generate highly carcinogenic dioxins.

#### **DAMAGED ECOSYSTEMS**

If solid waste is dumped into rivers or streams it can alter aquatic habitats and harm native plants and animals. The high nutrient content in organic wastes can deplete dissolved oxygen in water bodies, denying oxygen to fish and other aquatic life forms. Solids can cause sedimentation and change stream flow and bottom or benthic habitat. Siting dumps or landfills in or near sensitive ecosystems may destroy or significantly damage these valuable natural resources and the services they provide.

#### 3.4 POTENTIAL ENVIRONMENTAL IMPACTS FROM LAND ACQUISITION

Land acquisition disputes can potentially be politically and environmentally destabilizing when handled inappropriately. School construction must occur on land within a community to be successful at achieving its objective. Therefore, land in Malawi must be made available either through private, public, or customary-held lands. Private land is simply purchased from an individual with title to land. Public land is either private or customary land acquired by the state for the purposes of a project, and by the Malawian Constitution the previous holder of the land is compensated in cash or in kind. Customary land is 60-75 percent of Malawi's land and is granted to communities to be managed by local land committees and land tribunals often overseen by chiefs and headmen. All land set aside for the AMAA project was customary land prior to being donated for the construction of a school.

Given that some compensation is to be provided by either the community, state, or IP to a party in prior use of the land for the benefit of the community, it is important that the correct compensation is provided to the correct party. Determining the correct party can be difficult. Most customary land in Malawi is deemed to have no value until improvements are made upon it. Assuming control of a property with plowed fields can bring conflict with the community without negotiated compensation. A lack of compensation can also cause a prior tenant to lose their livelihood or become more economically disadvantaged. Designating a property too far in advance without knowing the occupants or users of the farm can cause conflict later as chiefs, headmen, local officials, or other well-advised individuals may obtain the land out of speculation that they can bargain for higher compensatory returns and previous tenants would rightly be upset. Providing cash over in-kind compensation can provoke political discontent if the cash is perceived to be too little or even too much as others in the community may find out and feel disenfranchised.

In-kind compensation is to designate a similarly valued land and to provide that as compensation. As no parcel of land is the same as any other due to micro-climates, topography, geographical positioning, or soil

quality, it is difficult to select the right in-kind compensation. Selecting ecologically sensitive land, or land that is a wildlife corridor, or forested land for compensation can lead to the destruction of that land due to agricultural or residential expansion.

# 4.0 ENVIRONMENTAL ANALYSIS

#### 4.1 RECOMMENDED THRESHOLD DETERMINATIONS AND CONDITIONS

The following table summarizes the determinations based on the environmental analysis conducted. Upon approval, these determinations become affirmed, per 22 CFR 216. Specified conditions, listed herein, become mandatory obligations of implementation per ADS 204 and provide guidance to the development of site-specific EMMPs. Determinations and conditions are established for each activity as well as each proposed construction site. Note that Pre-Construction Conditions are indicated under Projects/Activities and corresponding conditions. These Pre-Construction Conditions involve, e.g., professionally licensed certifications and guarantees of construction designs, Malawi government approval by letter or license of specified activities, and land acquisition documentation. Proof of completion of each of the Pre-Construction Conditions must be approved by the MEO prior to the commencement of construction activities.

TABLE 9: ENVIRONMENTAL THRESHOLD DECISIONS (DETAILED INFORMATION FOR THE COMPILATION OF TABLE 1 APPEARING IN THE EXECUTIVE SUMMARY AND APPROVALS SECTION)

TABLE 1 APPEARING IN THE EXECUTIVE SUMMARY AND APPROVALS SECTION)		
Projects/Activities	Threshold Determinations and Conditions	
Activity 1.1: School Construction	Negative Determination with Conditions:	
Pre-Construction Condition  →  Activity 1.2: Science Classroom Construction and Operation  Pre-Construction Condition	1) <b>Certified Construction Designs</b> : Construction designs (including blueprints of the buildings, laboratory space plus chemical storage containers, latrines, handwashing stations, bathing stalls, soak away pits, boreholes, etc.) specific to each site in which construction will occur must be created by a professionally-licensed engineering firm and be approved and permitted by the requisite government officials. The designs must state the height, number of stories, construction material (including roofing materials), points of ventilation, layout of desks in each school room identifying the number of students per room, and address Climate Change Risks as found in Section 4.2. For more guidance, see the Draft Construction Risk Management Mandatory Reference for ADS 201 in Annex K.	
$\rightarrow$	2) Quality Assurance Guarantee: A professionally licensed construction engineer / engineering firm (referred to as "QA engineer") must be subcontracted by the Project Team to oversee construction activities for quality assurance and monitor IEE compliance using the Project Team's EMMP. For more guidance, see the Construction Risk Management Mandatory Reference for ADS 201 in Annex I.	
	3) Environmentally Sensitive Areas and Surface Waters. The site is not within 30m of a permanent or seasonal stream or water body; will not involve the forced, coerced, or unfairly compensated displacement of existing settlement/inhabitants; has an average slope of less than 5 percent; and is not heavily forested, in an otherwise undisturbed local ecosystem, or in a protected area.	
Pre-Construction Condition →	4) Malawi Government Approval. This project does not fall under the Environment Management Act's (EMA) definition of a List A project that mandates an Environmental Impact Assessment (EIA) be done prior to construction. However, List B projects that may require an EIA cover almost all other construction projects. To determine if this project requires an EIA, as the Environment Management Act provides for penalties for non-compliance, the IP and USAID/Malawi must submit a Project Brief to the Director of the Environmental Affairs Department (EAD). A signed letter from the EAD stating that this project does not require an EIA, a signed	

waiver from the EAD, or a finalized and approved EIA report for the project is required prior to the commencement of construction.

- 5) **Overall Construction** will be undertaken in a manner consistent with the guidance for environmentally sound construction, provided in the Small-Scale Construction chapter of the USAID Sector Environmental Guidelines (http://www.usaidgemsorg/sectorGuidelines.htm).
- 6) Worker and Community Safety will be at the forefront of design, planning, and construction activities. Appropriate personal protection equipment (PPE) must be available and utilized for all workers. A first aid kit must be available during all construction activities with at least one worker on site at any time with the knowledge to use the kit to treat emergency situations. A firm delineation must be in place to keep community members from entering the construction site where they can be exposed to hazards. Fencing must be in place around areas that are hazardous like pits or areas with hazardous materials. Further, workers and community members must be sensitized in HIV/AIDS and STDs transmission. Safety measures as found in the Small-Scale Construction chapter of the USAID Sector Environmental Guidelines (<a href="http://www.usaidgems.org/sectorGuidelines.htm">http://www.usaidgems.org/sectorGuidelines.htm</a>) must be implemented. A resource for further Occupational Health and Safety measures can be found at <a href="https://www.ifc.org/ehsguidelines">www.ifc.org/ehsguidelines</a>.

#### **Pre-Construction Condition**

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- 7) Paint. No lead-based paint will be used. When lead-free paint is used, it will be stored properly to avoid accidental spills or consumption by children; empty cans will be disposed of in an environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers.
- 8) Waste handling equipment and infrastructure. A waste handling license must be obtained to destroy or transport construction waste from the EAD Director. All waste handling operations and infrastructure development will be undertaken in a manner consistent with the guidance for environmentally sound waste management, provided in the Solid Waste chapter of the USAID Sector Environmental Guidelines (<a href="http://www.usaidgems.org/Documents/SectorGuidelines/SectorEnvironmentalGuidelines">http://www.usaidgems.org/Documents/SectorGuidelines/SectorEnvironmentalGuidelines SolidWasteGuidelines 2014.pdf</a>).
- 9) Science Classroom Construction, Operation, and Maintenance. Construction will be undertaken in a manner consistent with the guidance for environmentally sound construction, provided in the Small-Scale Construction chapter of the USAID Sector Environmental Guidelines (<a href="http://www.usaidgems.org/sectorGuidelines.htm">http://www.usaidgems.org/sectorGuidelines.htm</a>). Security measures must be taken when designing and constructing a storage unit to safeguard any chemicals or combustibles. Staff training must be done to ensure appropriate oversight and maintenance of science demonstrations. Fire prevention techniques must be incorporated into the design of a science classroom if flammable materials, volatile chemicals, or the use of heat / fire are to be used within the classroom. Chemical storage must be handled by trained facility staff and kept in a stable, enclosed, and locked space to prevent accidental spills, fires, or theft that may lead to environmental or human health damage.

- 10) **Natural Disasters / Inclement Weather** such as earthquakes, strong winds, and hailstorms, must be planned for in the design and construction of infrastructure to ensure safety.
- 11) Risks Associated with Changing Climate must be accounted for in the design and operation of constructed facilities. All climate risk management (CRM) analyses must be approved by the Engineer of Record qualified to incorporate CRM findings into construction designs. Risks to building design and function will be impacted by increased temperature and increase in extreme weather and climate events. These climate stressors will impact material selection, construction design, and site selection. Specific risks and opportunities to address those risks are found in Section 4.2 and included in Annex A.
- 12) **Sourcing of Timber** must only be from legitimate suppliers who are approved by the relevant government authority, and who have government-approved timber transport permits.
- 13) Sourcing of Fill, Sand, and Gravel: IPs must require their general contractors to certify that they are not extracting fill, sand, or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials from vendors who do so.
- 14) **Use of Heavy Trucks** must be restricted on dirt roads so as not to damage them and impede community use of roadways. When dirt roads are not compact and dry, construction vehicles hauling construction materials must not operate on them. As the damage to roads is exponential based on the gross vehicle weight, reducing overall truck size will also greatly reduce road damage (i.e., using a 10-ton truck versus a 20-ton truck can make an order of magnitude difference in the number of times the truck can pass on a road to equal the same amount of road damage).<sup>34</sup>
- 15) Adverse Impacts Associated with Infrastructure Maintenance: To the extent possible, the implementing partner is to ensure that a realistic strategy for sustainably funding and sourcing local labor for the long-term maintenance and training in maintenance for all facilities.
- 16) Construction Camps for Workers. All communities have expressed that housing is available within their communities for rent for workers so as not to require a camp. If a worker camp becomes necessary, it needs to have a management plan in place to reduce the likelihood of negative relations with the host community (such as reducing risks for: security concerns, public health issues, speeding construction vehicles, improper disposal of waste, and illegal hunting or extraction of natural resources). Camps must also have temporary latrines (that will be demolished at the end of construction) and access to potable water and energy for cooking or lighting that does not cause strain on established communal systems.
- 17) **Air Quality**: Measures must be taken to keep dust (particulate matter) to a minimum during construction on site and in transit to the construction site. The WHO states

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<sup>34</sup> http://facweb.knowlton.ohio-state.edu/pviton/courses2/crp776/776-roads-handout.pdf

that there is good evidence short-term exposure to particulate matter with a diameter of less than 10 µm negatively impacts respiratory health.<sup>35</sup>

- 18) **Footpath delineation and clearing** (i.e., tree or shrub removal) should be done to minimize impacts on the environment, be in as straight of a line as possible between highest flows of pedestrians to minimize off-path diversions, and be graded to not accumulate standing water or promote erosion.
- 19) **Vegetation Removal** / **Replanting** should be avoided as much as possible for purposes of aesthetics, natural habitats, and erosion control. Revegetation is required where vegetation was disturbed or destroyed due to construction. Where trees are removed, for every one tree removed, two saplings of a tree species that bears fruit or will become a shade tree must replace the removed tree.

Activity 2.1: Construction or rehabilitation of small-scale sanitation water and includina infrastructure. protection of existing water sources. This may include boreholes. shallow wells. latrines, and spring capping and conversion of open wells pumps. includina associated infrastructure such as towers/tanks/standpipes.

**Pre-Construction Condition** 

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Activity 2.2: Capacity building for WASH equipment/system maintenance

## **Negative Determination with Conditions:**

For small-scale water supply and distribution infrastructure activities, the conditions are as follows:

- 1) Good-Practice Design Standards must be implemented for new construction and rehabilitation works consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: <a href="http://www.usaidgems.org/Sectors/watsan.htm">http://www.usaidgems.org/Sectors/watsan.htm</a>. Standards must be specified in the EMMP.
- Water Quality Assurance Plan (WQAP): The WQAP ensures that all new and rehabilitated USAID-funded water supplies provide safe drinking water, defined as meeting local and WHO water quality standards. Development of the WQAP must be consistent with USAID's WQAP Template: <a href="http://www.usaidgems.org/wqap.htm">http://www.usaidgems.org/wqap.htm</a>. Standards set in the WQAP must be specified in the EMMP.
- 3) **Water Supply**: A water abstraction Community Project license must be obtained from the National Water Resources Authority prior to the construction of water points. The quantities of water supplied by water points to expected beneficiaries must be consistent with standards set by the World Health Organization to ensure water is available at all times for drinking, personal hygiene, food preparation, cleaning, and laundry. 36 All constructed water sources must be implemented in a manner consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: http://www.usaidgems.org/Sectors/watsan.htm.
- 4) **Latrines** must be installed at constructed sites where children are expected to spend a significant portion of daylight hours, or are expected to overnight at the location, to satisfy the following basic child friendly principles<sup>37</sup>: gender-related needs and roles addressed, adequate capacity and minimal waiting time provided, appropriate dimensions and adjustments for children made, facilities physically separated by gender to provide privacy, facilities appropriately oriented, toilets

<sup>&</sup>lt;sup>35</sup> WHO Health Effects of Particulate Matter 2013

<sup>(</sup>http://www.euro.who.int/ data/assets/pdf file/0006/189051/Health-effects-of-particulate-matter-final-Eng.pdf)

<sup>&</sup>lt;sup>36</sup> World Health Organization's 2009 Water, Sanitation and Hygiene Standards for Schools in Low Cost Settings (http://www.who.int/water sanitation health/publications/wash standards school.pdf).

<sup>&</sup>lt;sup>37</sup> UNICEF Design and Construction Manual for Water Supply and Sanitary Facilities in Primary School in Ethiopia (https://www.unicef.org/wash/schools/files/WASH in Schools Design Manual.pdf).

appropriately located, toilet appropriately designed for age group, hygienic behavior in facilities encouraged, needs of children with physical disabilities addressed, quality not compromised when using low-cost solutions, and environmental, cultural, religious, and socioeconomic factor accounted for. The ratio of pupils to latrines must meet WHO and GOM standards. It is recommended the Project be more stringent on the female pupil-to-latrine ratio due to the Project's aim to increase adolescent female participation in secondary schools. The design of the latrine must be consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: http://www.usaidgems.org/Sectors/watsan.htm.

- 5) **Handwashing Stations** must be located very close to latrine facilities (within 1.5m of the latrine exit) to avoid the possibility of fecal-oral contamination and designed for effective use.<sup>38</sup> Dimensions of the station must be appropriate for the size of children expected to use the latrines.
- 6) Soak-Away Pits are to be constructed near to handwashing and bathing locations to control for runoff and wastewater contamination of soil and surface water and prevent erosion. Soak-away pits must be implemented in a manner consistent with USAID's Sector Environmental Guidelines: Water Supply & Sanitation: <a href="http://www.usaidgems.org/Sectors/watsan.htm">http://www.usaidgems.org/Sectors/watsan.htm</a>.
- 7) **Erosion** control methods around buildings must be implemented in a manner consistent with USAID's *Sector Environmental Guidelines: Water Supply & Sanitation:* http://www.usaidgems.org/Sectors/watsan.htm.
- 8) Risks Associated with a Changing Climate must be accounted for in the design and operation of constructed facilities. Risks due to climate change, such as heavier rains, stronger winds, and decreased surface and groundwater quality and quantity must be considered. Specific risks and opportunities to address those risks are included in Annex A.
- 9) Capacity-building in equipment/system maintenance must be co-programmed with construction/installation of small-scale sanitation infrastructure. Maintenance trainings must include hygienic cleaning and maintenance of latrines, handwashing stations, soak away pits, and bathing stalls.

## **Activity 3: Land Acquisition**

**Negative Determination with Conditions** to acquire land and ensure adequate resolution of all land tenure-related issues in conformance with the following best-practice criteria:

- 1) Consultative Process. In pursuit of inclusive decision-making, the IP must incorporate consultative processes with stakeholders, including government officials, community leaders, relevant community association representatives, neighbors of the specified property, and potentially project affected people, as to the previous use of the designated land and the owners and operators of the land prior to its designation as the site for the new secondary school, or teacher housing.
- Impacted Vulnerable Population. Investigate if vulnerable populations (women, children, disabled, etc.) will be impacted by the acquisition of the land parcel by the

<sup>38</sup> ibid.

Project. If vulnerable populations are to be impacted, ensure at least equitable rights for compensation to this segment of the population.

- 3) Compensation In-Kind. The IP, in conjunction with the GOM and the community, must ensure that equitable compensation is provided to the previous owners / operators of the land prior to its designation as the site for the new secondary school. Prior to construction, project affected people must be allowed to harvest any standing crops.
- 4) **Transparency.** Decisions made by the IP to provide compensation and to whom must be transparent.

# 5) Proof of Land Ownership / Rights to Land: To ensure the consultative process and appropriate compensation have occurred so that no pending claims to the designated land remain, other than that which allows for construction, four (4) documents are required for approval by the MEO prior to the commencement of construction activities: 1) An agreement between the relevant district government entity and the community leadership, granting specified lands for Project construction and operational activities. 2) An agreement between the community leadership and previous owners or users of the designated land as to the relinquishment of their rights to the land. 3) A certification from previous owners or users of the designated land as to their receipt of ownership or right to use of at least equivalent functional and yielding lands. 4) Documentation of the process to obtain these agreements / certifications is necessary and should include the following information: who previously owned / used the land, the date(s) and location(s) of public awareness meeting(s) and negotiation(s) for procuring the land.

# Specific Conditions

**Pre-Construction Condition** 

## **Additional Conditions:**

- Water table survey. The IP must check the water table status prior to construction
  of latrines. The bottom of a latrine pit is to be at least 1.5m above the highest
  seasonal point of the local water table. If a latrine pit cannot be dug without being
  within 1.5m of the water table, a raised latrine must be constructed to avoid
  groundwater contamination.
- Water Point Usage. If it is planned that an existing nearby water point will supply drinking water for school beneficiary use, the IP must monitor and report to beneficiaries the quality of water.
- Erosion and Sedimentation. Erosion control measures must be in place during construction around burrow pits and denuded lands as there are nearby hand-dug, unimproved shallow wells.
- Vegetation. Since the site is a woodlot, during construction, only the trees that are within the constructed area should be removed unless necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss. The IP to ensure that the communities have replaced vegetation cover to be lost as a result of construction on site or within the catchment area. Trees like Combretum species (Chinama) and Dalbegia Melanoxylon (Phingo) should be spared as they are reported to have value for furniture and medicinal purposes.
- Quarrying Clay. Clay burrow pits must only be made on-site and must not be deeper than 1.5m. Destruction of vegetation like large shrubs or trees must be avoided when establishing a burrow pit. After quarrying is completed, the pit must be filled in and leveled.

to

Specific Conditions to Namikombe site	<ul> <li>• Water Table Survey. The IP must check the water table status prior to constructing pit latrines. The bottom of a latrine pit is to be at least 1.5m above the highest seasonal point of the local water table. If a latrine pit cannot be dug without being within 1.5m of the water table, a raised latrine must be constructed to avoid groundwater contamination.</li> <li>• Water Point Usage. If it is planned that an existing nearby water point will supply drinking water for school beneficiary use, the IP must monitor and report to beneficiaries the quality of water.</li> <li>• Erosion and Sedimentation. Erosion control measures must be in place during construction</li> <li>• Privacy. Due to the proximity of houses and primary school, opaque fencing should be used around the construction site to provide privacy to the homes during construction.</li> <li>• Dust and Noise. As the site borders the community's primary school, limitations on dust and noise should be in place to not disturb classroom instruction. Construction vehicles must not speed near the primary school.</li> <li>• Vegetation. During construction, no trees should be removed unless absolutely necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss.</li> <li>• Construction in black cotton soils. The IP must ensure that proper engineering designs are done suitable for black cotton soils on this site. This should be guided by the geotechnical survey on the depth of the black cotton soils and provide necessary and adequate foundation designs. The geotechnicians and engineers to advise the suitability of this site for construction purposes or allocation of another suitable site should they find this site not suitable.</li> </ul>
Specific Conditions t	o Additional Conditions:
ryerenje suc	<ul> <li>Water Point Usage. If it is planned that an existing nearby water point will supply drinking water for school beneficiary use, the IP must monitor and report to beneficiaries the quality of water.</li> <li>Erosion. Erosion control measures must be in place during construction around burrow pits and denuded lands.</li> <li>Safety. Due to the proximity of numerous compounds, fencing must be used around the construction site to prevent unauthorized access to the construction site. Construction vehicles must not speed through any community, especially upon entering Njerenje site, and be notified of the location of the community's cultural center and graveyard. There should be adequate warning signs close to the site.</li> <li>Dust and Noise. As the site borders the community's primary school and is close to the r, limitations on noise and dust must be in place to not disturb class instruction or cultural events.</li> <li>Vegetation. During construction, no trees should be removed unless absolutely necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss. The IP to ensure that the communities have replaced vegetation cover to be lost as a result of construction within the catchment area.</li> </ul>

Quarrying Clay. Clay burrow pits must only be made on-site and must not be deeper than 1.5m. Destruction of vegetation like large shrubs or trees must be

		avoided when establishing a burrow pit. After quarrying is completed, the pit must
		be filled in and leveled.
Specific Conditions Namichere site	to	<ul> <li>Water Point Usage. If it is planned that an existing nearby water point will supply drinking water for school beneficiary use, the IP must monitor and report to beneficiaries the quality of water.</li> <li>Erosion. Erosion control measures must be in place during construction around burrow pits and denuded lands.</li> <li>Safety. Due to the proximity of numerous compounds, the primary school, church and nursery school, fencing must be used around the construction site to prevent unauthorized access to the construction site. Construction vehicles must not speed through any community, especially upon entering Namichere.</li> <li>Dust and Noise. As the site is situated near housing, a church, and primary school, limitations on noise and dust must be in place to not disturb class instruction or cultural events.</li> <li>Vegetation. During construction, no trees should be removed unless absolutely necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss.</li> <li>Ant termite treatment: Due to the presence of several Ant hill around this site the IP must ensure that proper termite treatment is provided during all stages of construction.</li> </ul>
Specific Conditions Chilanga site	at	<ul> <li>Erosion. Erosion control measures must be in place during construction around burrow pits and denuded lands.</li> <li>Safety. Due to the proximity of the church, fencing must be used around the construction site to prevent unauthorized access to the construction site. Construction vehicles must not speed through any community, especially upon entering the site.</li> <li>Dust and Noise. As the site is situated a church, limitations on noise and dust must be in place to not disturb class instruction or cultural events.</li> <li>Vegetation. During construction, no trees should be removed unless absolutely necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss.</li> <li>Protection of water bodies: as the site is upstream a river source the IP must ensure that the construction works upstream must not pose any threats to water body. Use of harmful substances should be prohibited and the flora and fauna at the water body should not be subjected to any potential threat by the construction workers.</li> <li>Site mapping and excavation considerations: Since the land has some rocky areas the IP must concentrate on the non-rocky areas to reduce excavation cost. This should be guided by proper site mapping to ensure that all structures are located within the non-rocky areas.</li> </ul>
Specific Conditions Mzimundilinde site	to	Additional Conditions:
MZIITIUITUIIITUE SILE		Water Point Usage. If it is planned that an existing nearby water point will supply drinking water for school beneficiary use, the IP must monitor and report to beneficiaries the quality of water.

- **Erosion.** Erosion control measures must be in place during construction around burrow pits and denuded lands.
- Safety. Due to the proximity of the primary school, fencing must be used around the
  construction site to prevent unauthorized access to the construction site.
   Construction vehicles must not speed through any community, especially upon
  entering the site.
- **Dust and Noise.** As the site is situated near a primary school, limitations on noise and dust must be in place to not disturb class instruction or cultural events.
- **Vegetation.** During construction, no trees should be removed unless absolutely necessary for construction. When a tree is determined to be removed, two new saplings, of a fruit, shade, or other useful type of tree, must be replanted on the property. Measures must be in place to minimize vegetation loss.

## 4.2 CLIMATE RISK MANAGEMENT

The summary of the process and findings of the climate risk management (CRM) screening created from the below matrix can be found in Annex A.

## ACTIVITY CRM TOOL OUTPUT MATRIX: CLIMATE RISKS, OPPORTUNITIES, AND ACTIONS

- \* = A required element, per the Mandatory Reference
- # Project elements may include Purpose / Sub-purpose, Areas of Focus, or Activities / Mechanisms, etc.

1.1: Defined or Anticipated Tasks or Interventions	1.2: Time- frame	1.3: Geography	2: Climate Risks*	3: Adaptive Capacity	4: Climate Risk Rating*	5: Opportunities	6.1: Climate Risk Management Options	6.2: How Climate Risks Are Addressed in the Activity*	7: Next Steps for Activity Implementati on*	8: Accepted Climate Risks*
Construction of 5 Community Day Secondary Schools (CDSS), including classrooms, science classroom, offices, latrines, and boreholes, if necessary.	The planned life of the building, Likely at least 30 years and potential ly much more.	Balaka District. 6 CDSS'. Sites include: Chilanga, Namichere, Makanjira, Njerenje, Mzimundilin de, and Namikombe	Temperatures in Malawi are expected to increase by 1-3° C by 2050. Increased temperatures could lead to: Increased cost of cooling.  Deterioration of construction materials due to thermal stress.  Both surface and groundwater decreased availability due to evapotranspira tion, this could especially impact water source and laboratory construction and function.  Increased stress and	Capacity to build on:  Government: The Ministry of Environment and Climate Change is responsible for sustainable use of resources and the environment. Within the Ministry of Environment and Climate Change, the Environmental Affairs Division works to develop and implement climate change related strategies.  NGO: The National Council for the Environment is a part of the EAD and is responsible for environment related issues, including climate change. The Malawi Civil Society Network	High	Climate resilient schools could be used as shelters during disasters and extreme weather events.  The type of construction used for these climate resilient schools and buildings could be used to educate community members and local businesses about the potential best practices to create climate resilient buildings.  Solar panels could be used for electricity while simultaneously limiting GHG emissions, and potentially	Conduct Construction Risk Screening and use the most up-to- date information about how the climate is changing over the long-term to make construction site decisions.  Follow good practice and design standards for water and sanitation, consider future climate impacts, such as increased temperatures and increases intensity of storms, when designing water and sanitation.  Use locally sourced material that can withstand	Engineering of record will include CRM as part of engineering design.  Construction will follow engineering design and use the most up-to-date information about how the climate is changing over the long-term to make construction site decisions.  Follow good practice and design standards for water and sanitation, consider future climate impacts, such as increased temperatures and increases intensity of storms, when designing	engineering design contract includes the following language: Engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality, and sustainability of resulting infrastructure and infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy, and	None

		Ol: 1	1, .	I	1 ,		1
[	demands on	on Climate	lowering energy	local climate	water and	determination	
	water	Change	costs.	conditions now	sanitation.	of safety	
	resources,	(CISONECC),		and in the		factors or other	
	including	coordinates the	The	future.	Use locally	measures of	
	potable water,	civil society	construction		sourced	uncertainty	
	because of	response to	and	Include CRM in	material that	that will be	
	demands from	climate change.	engineering	Environmental	can withstand	carried through	
	other sectors,	Several	best practices	Compliance	local climate	design. The	
	mainly	international	used in these	documents and	conditions	results of this	
	agriculture.	NGOs work in	structures could	implement the	now an in the	analysis,	
	· ·	Malawi on	be used to	projects	future.	including risks	
	Increased	climate change	educate the	EMMP.		identified and	
	health risks to	as well.	students that		Include CRM	how they are	
	malaria.		the schools	Ensure	in	addressed,	
		Donors:	about best	construction	Environmenta	shall be	
		Several donor	practices in	firms are aware	I Compliance	documented.	
		projects focus on	climate resilient	of climate risk	documents		
		climate change	construction.	prior to	and	Ensure that the	
		across sectors		construction,	implement the	construction	
		and working with		and follow	projects	companies	
		numerous		practices that	EMMP.	follow	
		government		are suitable for		guidelines	
		agencies.		local weather	Ensure	outlined by	
		USAID's climate		and climate	construction	Save the	
		work in Malawi is		conditions.	firms are	Children	
		focused on			aware of	Malawi and	
		fisheries,		Meet minimum	climate risk	Ramboll	
		ecosystems,		Disaster Risk	prior to	Engineers.	
		agriculture, and		Reduction	construction,	g	
		youth		standards in	and follow	Evaluate sites	
		development.		terms of	practices that	for potential	
		22.2.35		structural	are suitable	flooding, water	
		Plans and		integrity,	for local	issues due to	
		Strategies:		particularly	weather and	droughts and	
		There are several		considering	climate	increased	
		climate-related		future climate	conditions.	temperatures,	
		national		projects. This	conditions.	and lack of	
		strategies and		includes	Meet	access to	
		plans, including a		following	minimum	schools due to	
		National Climate		recommendatio	Disaster Risk	potential	
		Change		ns from Save	Reduction	flooding.	
		Investment Plan		the Children	standards in	noounig.	
				_	_		
		(2013-2018) and		Malawi and	terms of		

Alaysis of how climate change will impact considering integrity, particularly considering for potential flooding, water ramed lack of access to schools due to potential flooding.  Challenges  Challenges  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for education and consider water and constitution as structural integrity, particularly considering including including including including including including integrity. Analysis of how climate change will impact construction design, including in	
Contribution submitted to the United Nations Framework Convention on Climate Change.  Challenges  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
submitted to the United Nations Framework Convention on Climate Change.  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for including for construction design, includes for opetential flooding, water issues due to droughts, and lack of access to schools due to potential flooding.  Children Malawi and Ramboll Engineers.  Evaluate sites for potential flooding, water issues due to construction design, including material selection, and long-term use of build climate awareness and local capacity to adapt to climate change.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
United Nations Framework Convention on Climate Change.  Challenges  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for including for including for including flooding, water issues due to droughts, and lack of access to schools due to potential flooding.  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
Framework Convention on Climate Change.  Challenges There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for  Framework Convention on Climate Change.  Challenges  There is a lack of weather and climate related monitoring stations.  Framework Convention on Continue to flooding.  Continue to build climate awareness and local capacity to adapt to climate change across national strategic planning, including for  flooding, water issues due to droughts, and lack of access to schools due to droughts, and lack of access to schools due to droughts, and lack of access to schools due to droughts, and lack of access to schools due to potential flooding.	
Framework Convention on Climate Change.  Challenges  There is a lack of weather and climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
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climate related monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
monitoring stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for  monitoring stations.  build climate awareness and local capacity to adapt to climate climate change.  climate change.  due to droughts, and lack of access to schools during site due to schools due to potential flooding.	
stations.  There is a need to include climate change information and adaptation techniques across national strategic planning, including for  stations.  awareness and local capacity to adapt to climate flooding, water issues due to droughts, and lack of access to schools during site selection.  Evaluate sites for potential flooding, water issues due to droughts, and lack of access to schools during site selection.	
There is a need to include climate change information and adaptation techniques across national strategic planning, including for	
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change information and adaptation techniques across national strategic planning, including for	
information and adaptation techniques across national strategic planning, including for	
adaptation techniques across national strategic planning, including for	
techniques across national strategic planning, including for	
across national strategic planning, including for future use, during site due to selection. For flooding.	
strategic planning, including for	
planning, selection. potential flooding.	
including for flooding.	
education and Consider how I	
construction.   flooding at local   Continue   to	
sites has build climate	
There is a need historically awareness	
for skills and impacted and local	
resources at the access to capacity to	
local level to services. adapt to	
prepare for future climate	
climate change. change.	
There is an Consider	
overall lack of water	
funding in the availability,	
government to and future	
address national use, during	
site selection.	

		climate change priorities.			Consider how flooding at local sites has historically impacted access to services.	
	Rainfall and extreme weather and climate  Malawi is likely to experience a later beginning and earlier end to the rainy season. In addition,		High	See above	See above	Students may be unable to attend school due to increased demands on time because of changes in resources (financial or other) due to extreme

rainfall events are likely to be				weather events.
more severe,				ovonio.
but less				Changes in
frequent.				food and
Increased				water
number of dry				security, as
and hotter				well as
days could				health, due
lead to				to climate
increased				change
drought.				impacting
Potential				the
impacts				education
include:				sector
				throughout
Building				Malawi.
functions and				
services, such				
as providing				
water, getting				
rid of waste, or				
food storage,				
disrupted due				
to flooding and				
heat waves.				
Ground and				
surface water				
availability and				
quality				
decreased				
during				
droughts and				
floods.				
Increased				
damage to				
building				
infrastructure				
due to flooding				
and strong				
winds.				

Lack	of		
drainage infrastructu	for		
or bui	e, ling in		
sites,	in		
extreme flooding			
events.			
Students be unable	nay   to		
attend so	ool		
due	to		
increased demands	on l		
time bec	use		
of change	in		
resources (financial	or		
other) du	to		
extreme			
weather events.			
Changes	in		
food and v security,	ater as		
well as he	lth,		
due to cli	ate		
change impacting	the		
education			
sector			
throughout Malawi.			
mala vii.			

	1			_	 
	Site specific		Promote	Promote	That climate
	concerns	High	improved	improved	change may
			storage/	storage/	increase
	Balaka is one		transport	transport	human and
	of the five most		infrastructure	infrastructure	wildlife
	exposed		(also for activity	(also for	conflict at
	districts to		2).	activity 2).	sites located
	climate change		_/-	<b>,</b> -,	close to
	impacts in				protected
	Malawi.				areas or
	Widiawi.				areas with
	Some sites				high animal
	within Balaka				
					populations.
	District may be				That
	at risk of				That
	flooding due to				children,
	location next to				particularly
	wetlands and				girls, will be
	areas that are				unable to
	flooded often.				attend
					school due
	Some sites				to lack of
	within Balaka				access
	are at risk of				during floods
	lack of access				that destroy
	to potable				infrastructur
	water during				e.
	droughts.				
	Students will				
	be unable to				
	attend school				
	due to lack of				
	access during				
	flooding events				
	that destroy				
	local roads.				
	local roads.				
	Potential				
	increase in				
	human wildlife				
	interactions				
	due to changes				

			in ecosystems due to climate change.							
Next step: Timeframe	Next step: Geog.	Next step: Climate Risks	Next step: Adaptive Capacity	Next step: Risk Rating	Next step: Opps.	Next step: Risk Mgmt. Options	Next step: Selected Options	Next step: Next Steps	Next step: Accepted Risks	Finished!

# 5.0 MANAGEMENT

In addition to the specific conditions above, the negative determinations recommended in this IEE are contingent on full implementation of the following general monitoring and implementation requirements:

- 1. **IP Briefings on Environmental Compliance Responsibilities.** USAID/Malawi shall provide the IP with a copy of this IEE. The IP shall be briefed on their environmental compliance responsibilities by their cognizant AOR. During this briefing, the IEE conditions applicable to the IP's activities will be identified and explained.
- 2. Development of Environmental Mitigation and Monitoring Plans (EMMPSs). EMMPS are required to design and document the mitigation measures for impacts outlined above. EMMPs will be site specific, will include any site-specific siting plans, and will show resolution of any outstanding land tenure issues and will be submitted prior to the initiation of construction. The IP, whose activities are subject to one or more conditions set out in Sections 4 and 5 of this IEE, shall develop and provide for AOR review and approval an EMMP documenting how their project will implement and verify all IEE conditions. EMMPs will also be reviewed by the E3 and AFR BEOs upon request.

Subsequent schools or dormitories shall have their own site specific amendments to this IEE, and EMMPs created based on the conditions set forth in this IEE using EMMPs from pre-selected sites as models.

EMMPs must be completed before any construction or construction related activities occur.

These EMMPs must identify how the contractor will assure that IEE conditions that apply to activities supported under this award are implemented. In the case of a subcontract, the contractor may elect to require the subcontractor to develop their own EMMP. The AFR EMMP Factsheet provides guidance and sample EMMP formats: <a href="http://www.usaidgems.org/Documents/lopDocs/ENCAP">http://www.usaidgems.org/Documents/lopDocs/ENCAP</a> EMMP Factsheet 22Jul2011.pdf.

3. EMMP Integration and Implementation. The IP shall integrate their EMMP into their project work plan and budgets, implement the EMMP, and report on its implementation as an element of regular project performance reporting. It's very important that the IP has funds for environmental monitoring activities, any laboratory testing, and monitoring personnel.

IPs shall ensure that subcontractors and sub-grantees integrate IEE conditions into their activities, where applicable, and into their own project work plans and budgets. Subcontractors and sub-grantees are to report on their environmental compliance implementation as an element of subcontract or grant performance reporting.

- 4. **Integration of Compliance Responsibilities** in prime and sub-contracts and grant agreements.
  - a. USAID/Malawi shall ensure that any future contracts or agreements for implementation of AMAA Project activities, and/or significant modification to current contracts/agreements shall reference and require compliance with the conditions set out in this IEE, as required by ADS 204.3.4.a.6 and ADS 303.3.6.3.e.
  - b. The IP shall ensure that future sub-contracts and sub-grant agreements, and/or significant modifications to existing agreements, reference and require compliance with relevant elements of these conditions.

- 5. **Assurance of Sub-grantee and Subcontractor Capacity and Compliance.** The IP shall ensure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to sub-grantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management for their activities.
- 6. **USAID/Malawi Monitoring Responsibility.** As required by ADS 204.5.4, USAID/Malawi will actively monitor and evaluate whether the conditions of this IEE are being implemented effectively and whether there are new or unforeseen consequences arising during implementation that were not identified and reviewed in this IEE. If new or unforeseen consequences arise during implementation, the mission will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.
- 7. **New or Modified Activities.** As part of its Work Plan, and all Annual Work Plans thereafter, the IP, in collaboration with their AOR, shall review all ongoing and planned activities to determine if they are within the scope of this IEE.

If AMAA Project activities outside the scope of this IEE are planned, USAID/Malawi and W/E3/GENDEV shall ensure that an amendment to this IEE addressing these activities is prepared and approved prior to implementation of any such activities.

Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be modified to comply or halted until an amendment to the documentation is submitted and approved.

8. **Compliance with Host-Country Requirements.** Nothing in this IEE substitutes for or supersedes IP, sub-grantee and subcontractor responsibility for compliance with all applicable host-country laws and regulations. The IP, sub-grantees and subcontractor must comply with host-country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the more stringent regulations govern.

# 6.0 LIMITATIONS OF THIS INITIAL ENVIRONMENTAL EXAMINATION

The determinations recommended in this document apply only to projects/activities and sub-activities described herein.

Other projects/activities that may arise must be subject to an environmental analysis and the appropriate documentation prepared and approved in an Amendment to the IEE or other type of document.

Other than projects/activities determined to have a Positive Threshold Decision, it is confirmed that the projects/activities described herein do not involve actions normally having a significant effect on the environment, including those described in 22CFR216.2(d).

In addition, other than projects/activities determined to have a Positive Threshold Decision and/or a pesticide management plan (PERSUAP), it is confirmed that the projects/activities described herein do not involve any actions listed below. Any of the following actions would require additional environmental analyses and environmental determinations:

- Support project preparation, project feasibility studies, engineering design, or the implementation of activities listed in §216.2(d)(1);
  - o (i) Programs of river basin development;
  - o (ii) Irrigation or water management projects, including dams and impoundments;
  - o (iii) Agricultural land leveling;
  - o (iv) Drainage projects;
  - o (v) Large scale agricultural mechanization;
  - o (vi) New lands development;
  - o (vii) Resettlement projects;
  - o (viii) Penetration road building or road improvement projects;
  - o (ix) Power plants;
  - o (x) Industrial plants; and,
  - o (xi) Potable water and sewerage projects other than those that are small scale.
- Affect endangered and threatened species or their critical habitats per §216.5, FAA 118, FAA 119;
- Provide support to extractive industries (e.g. mining and quarrying) per FAA 117;
- Promote timber harvesting per FAA 117 and 118;
- Support agro-processing or industrial enterprises;
- Provide support for regulatory permitting;
- Lead to privatization of industrial facilities or infrastructure with heavily polluted;
- Procure or use genetically engineered organisms; and/or
- Assist the procurement (including payment in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, clean-up of spray equipment, and disposal) of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials. Pesticides cover all insecticides, fungicides, rodenticides, etc. covered under the Federal Insecticide, Fungicide, and Rodenticide Act per §216.3(b).

Further, this IEE amendment also does not cover any road construction or rehabilitation. Any road construction or improvement activities require an amendment to this IEE.

## 7.0 REVISIONS

Per 22 CFR 216.3(a)(9), when ongoing programs are revised to incorporate a change in scope or nature, a determination will be made as to whether such a change may have an environmental impact not previously assessed. If so, this environmental analysis will be amended to cover the changes. Per ADS

204, it is the responsibility of the USAID AOR to keep the MEO/REA and BEO(s) informed of any new information or changes in the activity that might require revision of this environmental analysis and threshold determination.

## 8.0 ANNEXES

# 8.1 ANNEX A: SUMMARY OF CLIMATE RISK MANAGEMENT SCREENING FOR CONSTRUCTION ACTIVITIES UNDER USAID/MALAWI AMAA

## **General Background:**

The USAID/Malawi *Apatseni Mwayi Atsikana Aphunzire* (*AMAA*) project aims to decrease the barriers to girls' education in Malawi. The project, implemented by Save the Children, has a range of activities. This activity is:

• Construction of Community Day Secondary Schools (CDSS). Six new CDSS' are planned to be built each in Balaka District (all six, are covered in this IEE amendment; the sites for the other schools are now under construction).

The purpose of this Climate Risk Management (CRM) screening is to identify climate related risks to these construction activities now and in the future to make this project more resilient to both future and current climate variability and change. This is an initial analysis. The final analysis will be done by the engineerof-record. As stated in the infrastructure annex for CRM screening (https://www.climatelinks.org/resources/climate-risk-screening-management-tool), 'engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality, and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy, and determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.'

This screening is part of implementing the Reference for ADS Chapter 201, 'Climate Risks Management for USAID Projects and Activities.'

Reference to ADS Chapter 201: https://www.usaid.gov/ads/policy/200/201mal

## **Summary of Climate Risk Screening Process:**

This CRM was completed largely through a desktop review. This included reviewing:

- Project specific information, including available environmental compliance information.
- Climate information, including information specific to Malawi and the infrastructure and educations sectors.
- Construction-site specific information.
   Examples of other, similar, construction activities completed by USAID.

Based on this review, the CRM screening matrix, which is the suggested tool to complete CRM screening and can be found on climatelinks.org, was completed. The matrix outlines specific climate risks to project implementation, and opportunities to address those risks. In addition, key findings, and recommendations to address climate risks, are highlighted below and were integrated into the Initial Environmental Examination (IEE) Amendment for this activity. Input from USAID is welcome on the CRM table.

Key findings and recommendations for the CRM are summarized below.

## **Summary of Climate Risks and Recommendations:**

The climate risks, and opportunities to address those risks were identified for school. There were some site-specific differences that were highlighted. Balaka is one of the top five districts in Malawi exposed to climate change. Careful consideration should be given to climate change during site selection in all cases.

In many cases, the risks due to climate change to future building use, functionality, and safety, are already being incorporated into construction design. Specific climate risks, and opportunities to address those risks, are highlighted below.

# Temperatures in Malawi are expected to increase by 1-3° C by 2050, resulting in risk to construction and building use.

Increased temperatures could have impact on multiple faucets of construction that should be considered during site selection and construction design. Some areas that should be considered are selection of construction materials that can withstand thermal stress, selection of sites based on surface and groundwater availability, which will likely decrease in the future due to evapotranspiration, and decrease water availability due to demands on water resources from other sectors, primarily agriculture.

This was classified as a *moderate* risk due to the combination of having a high probability of occurring, but having a moderate impact on project implementation.

# Changes in rainfall and extreme weather and climate events impacting building function.

Rainfall and extreme weather events are likely to change in Malawi in the future. Malawi is likely to experience a later beginning and earlier end to the rainy season. In addition, rainfall events are likely to be more severe, but less frequent. Increased number dry and hotter days could lead to increased drought.

Because of increase in both floods and droughts, building functions and services, such as providing water, getting rid of waste, or food storage, may be disrupted. During droughts, ground and surface water availability and quality will likely decrease. Floods can lead to building infrastructure being damaged. Furthermore, inadequate drainage could lead to extreme flooding.

There are also potential secondary risks to consider, for example, students may be unable to attend school due to increased demands on time and resources because of extreme weather events. Climate change will likely impact both food and water security, and exacerbate health problems, leading to negative impacts on the education sector. These impacts are likely to impact youth, and potentially girls, more than other demographics.

This was classified as a *high* risk due to the combination of having a moderate to high probability of occurring and having a high impact of future function of construction.

## Site specific risks

Site selection is important when considering risks from floods, drought, and other climate related impacts to infrastructure use.

Some sites within Balaka may be at risk of flooding due to their location next to wetlands and areas that are flooded often. Similarly, some sites within Balaka are at risk of lack of access to potable water during droughts.

Another risk is that students will be unable to attend school due to lack of access during flooding events that destroy local roads There is also potential for increase in human-wildlife interactions due to changes in habitats due to climate change, areas with abundant animal populations will be impacted most.

This was classified as a *high* risk due to the combination of climate impacts having a high probability of effecting local communities, and having a high impact of future function of construction.

## Recommendations and opportunities to address risks

- Address risks through processes already integrated into construction design and project implementation. Many activities are already being untaken to limit the impacts of climate and weather. For example, a construction risk screening will be completed, minimum disaster risk reduction standards in terms of structural integrity are being reviewed. As a result of this CRM screening, climate change is being incorporated into the environmental compliance process. Climate impacts should be considered during these processes that are already in place.
- Use existing climate data and information when considering site and material selection and long-term functionality of buildings. Climate information, and climate vulnerability assessments, have been conducted and compiled for Malawi on the USAID climate links website: (<a href="https://www.climatelinks.org/search/malawi">https://www.climatelinks.org/search/malawi</a>). In addition to this type of information, discussing weather and climate with local communities, and reviewing national climate plans, will help ensure climate change is considered throughout implementation and improve future resilience of infrastructure. Understanding of existing climate information will help the project consider future climate impacts, such as increased temperatures and increases intensity of storms, when designing infrastructure and selecting sites.
- Further climate specific analysis, if affordable and feasible, and aligns with mission priorities. This could include and in depth analysis of how climate change will impact construction over medium to long term time periods and inform material selection. Or to evaluate sites for climate impacts, such as potential flooding, water issues due to droughts and increased temperatures, and lack of access to schools due to potential infrastructure loss during flooding.
- Accept some risks. Some risks may be outside the scope of the activity, or may be worth accepting because the benefits outweigh the costs. For example, while it is possible that students may be unable to attend school due to increased demands on time because of changes in resources (financial or other) due to extreme weather events, it might be worth accepting this risk. Similarly, since changes in food and water security, as well as health, due to climate change will likely impact Malawi nation-wide, addressing this risk is likely outside the scope of this activity.

## 8.2 ANNEX B: SAVE THE CHILDREN SITE SELECTION CRITERIA FOR AMAA

Sites within each district were compared based on:

- 1. The number of villages that would feed into the school, the farthest distance to a village that would feed into the school
- 2. The distance from the school to a current CDSS, the number of children that sat for the PSCLE in the previous year in the area
- 3. The number of children in the area that passed the test
- 4. The number of children in the area selected for secondary school
- 5. The number of children still attending a CDSS from the area, the reasons for children dropping out of a CDSS in the area
- 6. The outcome of children in the area when they are not selected for CDSS
- 7. The activity of various communities in the area trying to address issues of school secondary school attendance
- 8. Whether or not a community had ever constructed buildings
- 9. Whether or not a community had contributed to the construction of school blocks
- 10. Whether or not the community had built teachers' houses and the time it took to complete
- 11. Whether or not the community is ready to construct more houses for teachers
- 12. The factors that affect communal building, whether or not a community had ever accessed local funds
- 13. Whether or not women were present at community meetings to discuss the Let Girls Learn activity
- 14. Whether or not the MG was active
- 15. Whether or not church land was available

# 8.3 ANNEX C: CRITERIA CROSSWALK FOR THE SELECTION OF SITES IN BALAKA DISTRICT

Table a. Community assessment results for Balaka site assessment

Criteria for compari son	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
School Name	Chiendausik u	Ng'onga	Nangulukutich e	Chikolek a	Ngwen gwe	Chilanga	Ntalikach ao	Namikombe	Makanjir a	Chinkhu mbe	Mitengw e	Thundu	Njerenj e	Namich ere	Muthe
Zone	Chiendausik u Zone	Chiendausik u Zone	M'manga Zone	Nkhond e Zone	Nkhond e Zone	Nkhonde Zone	Chember a Zone	Kankawo zone	Chienda usiku zone	Chienda usiku	Mmanga Zone	Utale Zone	Utale Zone	Maduwa ni Zone	Maduwa ni Zone
Date of assess ment	26th Feb 2018	16th April 2018	27th Feb 2018	28th Feb 2018	28th Feb 2018	01st March 2018	01st March 2018	2nd March 2018	16th April 2018	16th April 2018	17th April 2018	18th April 2018	18th April 2018	19th April 2018	19th April 2018
Enrollm ent	Total 1,178, girls - 600, boys -578	Total - 816, girls - 401, boys - 415	Total - 825, Boys - 401, Girls - 424	Total - 1031, boys - 492, girls – 539	Total - 639, Boys - 329, girls - 310	Total - 1041, Boys - 533, Girls – 508	Total - 1094, boys - 502, girls - 592	Total - 941, boys - 462, girls - 479	Total enrollme nt 902, boys 429, girls 473	Total enrollme nt 912, boys 466, girls 446	Total - 1207, boys - 645, girls - 562	Total - 1162, boys - 555, girls - 607	Total - 1023, boys - 513, girls - 510	Total - 776, boys - 402, girls - 374	Total - 1033, boys - 500, girls - 533
Number of villages which feed into the school	18 feeder villages	15 feeder villages	15 villages in total (Amidu, Katapira 1&2, Elioti, Thomu, Chikhwasa, Molosi, Mtetemera, M agombo, Mdala 1, Kabololo, Musa, Mponda, Mdala 1&2)	19 feeder villages in total (Chikolo ngo, Kamwa na, Muhinda , Chalum bwa, Bokosi, Likongol o, Ngasale , William, Namond e, Kimu, Makawa , Namuya , Mbera, Chamba , Gunda, Bandaw e,	9 feeder villages (Mussa, Kabotol o, safali, Kampo ango, Mpond a, Chabw era, Manda nda, Mathuw a, Mdeng a 2)	9 feeder villages (Chibwana,Cho mbe1&2, Chikumba, Mapando,Kadz uwa, Mpata, Sumani, Ofesi)	12 feeder villages (Kaisi, Chilomb o, Kumpind a, Saiwala, Wadi, Ellias, Mandan da, William, Sikelo, Amini, Chiphwa nya, Kalambo	20 feeder villages (Chiyembeke zo, Kalimba, Mitochi, Mulero, Chimpakati, Nkolola, Bonongwe, Sakanena, Selemani, Ma nyekula, Chiganga, Nzito, Phasule, Manjanja, Ngwalu, Gangala, Chitala, Ndundumala , Kadyawo, Chituwa)	18 feeder villages	13 feeder villages	5 feeder Schools	15 feeder schools	16 feeder schools	10 feeder villages	14 feeder villages

Closest CDSS	St Louis CDSS which is at Balaka boma and St Charles Lwangwa CDSS also at the boma. Both are about 17km from Chiendausik u primary school	St Louis CDSS is the closest secondary school to the primary school and is about 10kms away from the primary school. This CDSS is at Balaka boma.	Mmanga CDSS which is about 12kms. One way bicycle taxi is K500 to K800	Namalo mba CDSS which is about kms, some travel by bicycles and others rent houses closer to the school to do self-boardin g	Ulongw e CDSS which is about 18kms. All the learner s do self- boardin g when they are selecte d to this school.	Mmanga CDSS which is about 10kms from the primary school	Chembel a CDSS which is about 12 kms from Ntalikach ao primary school. Some of the children walk even longer distance s especiall y those traveling from Mandan da village meaning that they travel almost 15kms	. Some go to Kankawo CDSS, others go to Livilivi CDSS. Kankawo CDSS is about 11kms and Lillivi is 12kms away from the primary school	The closest CDSS is St Louis CDSS, which is at Balaka boma. It is about 10kms from the primary school.	The closest CDSS is Dziwe which is about 12 kms from the primary school	Mmanga and Dziwe are the schools where the learners are selected to. Dziwe is about more than 15 kms. Closest school is Dziwe though children are not selected here but to Mmanga .	The closest CDSSs is Utale CDSS which is about 23kms from the primary school. However some learners travel even further their homes are further than that	The closest CDSSs is Utale CDSS which is about 16kms from the primary school. However some learner s travel even further their homes are further than Njerenj e primary school	The closest CDSS is Dziwe CDSS which is about 15kms from the primary school. School	The closest CDSS is Utale CDSS which is about 12kms from the primary school.
How many children sat the PSCLE last year	Sat for PSLCE - 65 learners, boys - 47, girls - 18,	Sat for PSLCE Total - 19, Boys -6, Girls - 13	Sat for PSLCE Total - 27, Boys - 17, Girls - 10	Sat PSLCE 57, boys - 29, girls -28	Sat for PSLCE Total - 21, boys - 10, girls - 11	Sat for PSLCE Total - 32, boys -19, girls – 13	Sat for PSLCE Total 50, Boys - 23, girls – 27	Sat for PSLCE Total - 39, boys 23, girls - 10	Sat for PSCLE Total 27, boys 13, girls 14	Sat for PSCLE Total - 24, boys -9, girls- 15	Sat for PSLCE - 70, boys - 40, girls - 30	Sat for PSLCE - 60, boys - 28, girls – 32	Sat for PSLCE - 49, boys - 31, girls -18	Sat for PSLCE - 41, boys - 24, girls - 17	Sat for PSLCE - 118, boys - 52, girls - 66
How many children passed	Total passed 54, boys -40, girls -14	100% pass rate	100% pass rate	100% pass rate	100% pass rate	100%	A total of 46 learners passed, Boys - 22, girls - 24	100% pass. Pass rate of 100% for this school every year	100% pass rate	Total number of learners who passed - 22, boys- 9, girls – 13	Passed 67, boys - 36, girls - 21	Total Passed- 21, boys - 13, girls -8	Total passed - 34, boys - 23, girls - 11	Total passed - 41, boys - 24, girls - 17	Total passed - 58, boys - 24, girls - 34
How many children were selected for seconda ry school?	17 learners were selected	Selected Total - 7, Boys - 5, Girls -2	Selected total - 9, Boys - 5, Girls - 4	Selecte d 31, boys - 15, girls - 16. Three boys went to Balaka	Only 3 were selecte d 2 girls and 1 boy	Total - 14, Boys - 6, Girls – 8	Total selected - 11, Boys - 5, girls 6. One of the boys were selected	Total selected - 9, boys - 4, girls - 5. All went to Kankao CDSS	Total selected -3, Boys - 3, Girls - 0.	Total selected 11, boys 3, girls 8	Total selected 45, boys - 10, girls - 2	Total selected - 6, boys -2, girls - 4	Number selecte d - 8, boys - 6, girls - 2	Number selected - 25, boys - 14, girls - 11	Number selected - 3, boys - 14, girls - 17

				Second ary School			to Balaka Seconda ry School								
How many children are still going	Some failed to report to St. Charles Lwangwa which is a catholic secondary school and very expensive as such they asked to be transferred to St. Louis where they are going now.	All the children selected are still in school.	1 girl failed to go to school due to financial support. The other 8 are still going to school.	All the children selected are still in school.	All the children selecte d are still in school.	All the children selected are still in school.	All the children selected are still in school.	All the children selected are still in school.	All the children selected are still in school.	All the children selected are still in school.		All the children selected are still in school.	All the children selecte d are still in school. But some of those selecte d in the past have droppe d out.	All the children selected are still in school.	All the children selected are still in school.
what are the reasons for drop out	Lack of school fees, self-boarding support, poverty resulting in pregnancies as girls accept favors from men when they are at self-boarding facilities, Long distance to school	Early marriages, early pregnancies , peer influence into drug and alcohol abuse, Long distances to school results in developmen t of relationships , frequent absences. Some learners opt for self- boarding, this also presents a risk as the learners are no longer under any adult supervision as such	Long distance to the secondary school (some travel by bicycle while others rent. This leads to frequent absences and eventually drop-out, Money for rent for self-boarding. Early pregnancies are also common as the girls stay away from home unsupervised.	Long distance to school, money for rent and upkeep for the children, fees, uniform there are many costs associat ed with the child accessi ng the seconda ry educatio n. Early pregnan cies is also an issue due to	Fees, early pregna ncies, cannot afford rent. Long distanc e to school is the main reason. Early pregna ncies also come up becaus e they are not protect ed, they are alone with no parents	The primary challenge is long distance to school, most learners are cycling to school while others do self-boarding. Fees is also a problem. Self-boarding presents problems as parents do not have enough money to support the children this leads in some children being lured into relationships that lead into early pregnancies.	Long distance to school is a major problem. Long distance s lead in tiredness and poor performa nce of the children. Others do self- boarding at the school but this also brings problems especiall y for girls as they are unsuperv ised by	Long distance to school is a major problem, some go by bicycle, some walk. This leads to late arrival and sometimes being sent back by the teacher. Due to long distances girls are coaxed into relationships. Some children are self-boarding at the CDSSs but for girls this also poses a problem as they are away from	Major reasons for drop out is distance to nearest seconda ry school, lack of school fees and also support for self-boarding which most of the students selected to St. Louis opt for.	Major reasons for drop out is school fees and distance to the CDSS, pregnan cy and early pregnan cy.	Most children do not finish seconda ry school because the school is very far, school fees, examina tion fees, Parents have difficultie s to manage all these expense s. Dire poverty of the household making it difficult	Long distance to school is the major factor for high drop-out in seconda ry schools. There is also a river between the school and the communi ties and when the river is full they fail to cross. Most students selected to Utale	Long distanc es are the major proble m. Learner s end up going for self- boardin g this is a challen ge becaus e this means the children do not have any parenta I supervi sion as such	Long distance to current schools is a major problem . In addition, it is difficult to cross streams during the rainy season. Female learners are approac hed by men along the way and receive marriag e	Long distance to current schools is a major problem . In addition, it is difficult to cross river during the rainy season. Female learners are approac hed by men along the way with some ending up

	and boys	supervis		are not		to	boarders	the girls	I. The	and/or
	engage in	ion for		supervised,		support	. This	engage	attende	pregnan
	risky	those		at the end of		them	puts a lot	in risky	es note	t. Many
	behaviors	who are		the day the		with to	of	behavio	that	learners
	that lead to	not		children fall		go to	pressure	rs and	learners	end up
	early	boarder		prey to		school.	on	end up	end up	self-
	pregnancies	s, risk of		relationships		The	parents	coming	starting	boardin
	and other	girls		and become		mother	as all	home	school	g where
	delinquent									
		being		pregnant.		groups	support	pregna	late due	they
	behaviour.	raped				are	such as	nt. The	to	receive
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		way.				have	food etc.	proble	of	monitori
		There is				meeting	needs to	m the	distance	ng by
		а				s and	be	self-	. Many	adults.
		dormitor				convers	supporte	boardin	learners	The
		y at				ations	d by	g	end up	distance
		Namalo					their	system	self-	was
		mba					parents.	s is that	boardin	noted
		CDSS					Girl self-	this	g	as being
		but not					boarders	present	leading	far too
		all girls					do not	s a	to	long for
		get a					have any	great	issues	younger
		chance					parental	financia	related	learners
		to get					supervisi	1	to no	
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		y. The					engage	parents		
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What happens to children who are not selected?	Some never return to school, some repeat, some go to private schools, others go to open day secondary school	Some never return to school, some repeat, some go to private schools, others go to open day secondary school	Some repeat, some go to open day secondary school, private school fees are expensive so most do not go to school		Some repeat	Some go to private schools and they pay about K25,000, others repeat, others just drop-out	Some repeat, others go to private secondar y schools, some go to open day secondar y schools while others just quit	Some repeat, others go to private schools, others go to open day secondary school. But none just quit	Some have gone to open seconda ry schools, pothers are at private schools	Some go to private seconda ry schools, others go to open seconda ry schools others are repeatin g	Some go to open day seconda ry school, some repeat std 8, others drop out. These are problem s as they increase the classroo m size in standard 8 when they repeat. At open day seconda ry school, most	Some are going to night school/ open school, some are repeatin g std 8, and some just drop out. But all those that failed last school year are repeatin g.	Most of the children repeat standard 8, others go to a differen t school to repeat. Some go to night school/open day second ary school.	19 learners are repeatin g standar d 8. Others are attendin g open seconda ry school at night.	Some of the learners go into busines s on their own or farming. Others end up repeatin g Standar d 8.
What is the commun ity trying to do to address these problem s?	The community started constructing their own secondary school using LDF funds	Mother group in the area is active in mobilizing and supporting teen mothers to return to school, Mother group also assists with other school requirement s such as uniforms.	Mother groups are supporting teen mothers to return to school. As parents we tried by collecting money to build a secondary school closer to the tarmac road but we failed to complete is as funds were misappropriat ed. The community	Mother groups are frying to bring teen mothers back to school. Howeve r this is sometimes a problem as some parents are not coopera tive. There are by-	The mother group is active in the commu nity and have manag ed to convinc e parents and girls to return to school as a teen mother.	Mother group members support some most vulnerable learners with fees, soap, sanitary pads, and other needs. The communities also have bylaws against child-marriages.	There is an active mother group which follows up on girls who dropped out. Mother groups hold counselling sessions with girls at the school. There is a female	Mother group is very active. They are able to bring teen mothers back to school. The community also has bylaws. Chiefs refuse to accept child marriages. (Testimonies were given). Even when there are early pregnancies parents of	Mother group is trying to reduce drop out by holding counselli ng campaig ns. The commun ity was promise d a seconda ry school at some point by a politician	Mother groups are very active and they monitor learner attenda nce and encoura ge the girls to go to school.	learners are self-boarders  As parents we see the open day seconda ry school as an option. So we find some money to support them to attend this school.	The community identified land that they have been considering for many years as a site for a secondary school. They have molded approxi	The commu nity identified land and molded and burnt bricks so that the govern ment can see that we are serious but also ready to have	Mothers' group is active and encoura ge girls to stay in school. They go to villages, talk to parents, and convinc e girls who have dropped out to	Have reached out to politicia ns to request help in building a CDSS, but have not had success . They have saved money to support a

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Has the commun ity ever constructed any building s?	Yes; they have completed one school block with two classrooms at the site for the secondary school. They also constructed a CBCC	Yes, the community has constructed school toilets, and the foundation and super structure of a classroom block up to window level.	Yes	The commun ity has built and complet ed a school block and a teacher's house.	Maintenance of school blocks, and toilets and construction of a teacher's house. The communities collected money for the developments.	Not on their own	Yes, they have constructed 4 school blocks and 6 teachers' houses. The school blocks and 5 teachers houses were constructed in 1990 and 1 teacher's house was constructed in 2010. One administration block has been started with support from SIP. This project started last year. The super structure has been completed and the roofing is done but the finishing still remains to	Yes, they have construc ted teachers houses and sanitary hygiene changin g rooms for girls	Yes, they have construc ted a school block and a teacher' s house.	Yes they have built a school block and teachers houses. They have been supported by governm ent with building material s	The community has molded a brick kiln of 140,000 bricks. The community has built a teachers house and have also built toilets	The commu nity have built teacher s houses at the primary school. They have also assiste d with building the school blocks. They also built a tempor ary shelter before the school blocks were built.	The commu nity have built teacher s houses at the primary school. They have also assisted with building the school blocks.	The commu nity have built teacher s houses at the primary school. They have also assisted with building the school blocks and donated material s for this as well.
Has the commun ity ever contribut ed to the construction of school blocks?	Yes; they contributed sand, bricks and labor for water	Yes, they contributed sand, bricks and labor	Yes they have built 2 classroom block. The iron sheets and planks were provided by the MP at the time and Save the children supported them with cement for the floor and lime for the walls	One school block complet ed and another still under construc tion.	No	They molded and burnt bricks, collected river sand, local masons did the construct ion. The project was supporte d under the	remains to be completed.  Yes, they contributed labor for drawing water, collecting sand, molded and burnt bricks	They mobilize d river sand, quarry stones	They molded and burnt the bricks, collecte d sand and quarry stone and provided labor.	Yes they have molded bricks. They have built bricks	The community mobilize d some of the resource s such as sand, quarry, and iron sheets. The community employed a mason to build	We have been contribu ting by collecti ng sand and molding bricks.	We have been contribu ting by collectin g sand and molding bricks.	We have been contribu ting by collectin g sand and molding bricks.

						MASAF program					the house.			
house	Yes; at Chiendausik u primary school	No, the teacher's houses at the school were constructed by the catholic mission.	Yes, they build a teachers house.	Yes, one teachers house built	Yes, they have constructed 1 teacher's house.	For 2 teacher's houses they molded and burnt bricks, collected river sand, local masons did the construct ion. The project was supporte d under the MASAF program	Yes, 6 teachers houses	Yes.	Yes, one teachers house	Yes, they have built one teachers house at the school but it was quite some time ago. Most current parents did not participa te in the building of the teacher's house.	They have built 3 teachers houses before	Yes they have built several teacher s houses	Yes they have built several teacher s houses	Yes they have built several teacher s houses
How long did it take them?	It was built some 7 years ago and few could remember how long it took to complete	n/a	It took them 2 years. They completed the project about 6 years ago.	School block took 3 months and teachers house took less than a month	The teacher's house took 3 months to be completed.		The school blocks were built in 6 months, LDF house took 3 months	The teachers house took them 2 months for complet e.	It took the commun ity 3 months to complet e the teachers house	We have difficultie s with water The borehole s are very far apart.	The teacher's house took less than a month.		The teacher's houses and school blocks took 4 months to build.	The teacher's s houses took 3 months to build.

Is the commun ity ready to construc t more teacher's houses?	Emphatic yes	Yes they are	Emphatic yes	Emphati c yes	Emphat ic Yes	Both chiefs and community members, they were very willing to contribute to the development initiative.	Emphati c yes	Emphatic yes, with clapping and ululation.	Yes	Yes	Yes	Yes, they can complete it in 3 months if they were provided with all the materials , Water and river sand are readily available in this area. Commun ity is enthusia stic.	Yes they are willing to build the teacher s houses and if they are provide d with all the material it would take them less than 3 months to finish the houses.	Yes, they are willing to do build the new teacher s' houses. River sand is availabl e, althoug h they are concern ed with water availabil ity. Commu nity ululated and women danced at conclusi on of meeting .	Yes, they are willing to do build the new teacher s' houses. River sand and water is available e. In the past have run into issues with contract ors and have even had legal battles with them.
What are the factors that affect this building?	Late delivery of construction materials to the site	Inadequate cement - they got the cement they have used so far from the left over from a rehabilitatio n program that took place at the school. Inadequate funds to complete the project	Some parents sometimes did not always show up to support the project, however the community leadership was very vibrant in following up those members and things improved.	Some commun ity member s are not willing to participa te in develop ment projects. The commun ity failed to find other opportu nities from the councilo r or MP.		Some community members were not cooperative so the chiefs would talk to them.	There is a water problem in this area. The people had to collect water from long distance s to support the projects.	The key challenge they faced was in availability of water. The distance where sand was collected is also very far. A few people were not cooperative but the majority were.	Water scarcity is the major problem. The water table is very low.	The key challeng e they faced during the construction is scarcity of water.	Water availabili ty is the biggest problem	There are no problem s if materials are available as water and sand are also readily available in the area.	Normall y the proble m has been timely availabi lity of material s. Njerenj ere primary school has a borehol e but we would appreci ate if there could	The commu nity is concern ed with water availabil ity and believe construction time would be shorten ed if a borehol e was provide d at the CDSS site.	As noted above, the commu nity is most concern ed with getting a poor contract or. They state they are ready to assist.

										be a borehol e drilled at the second ary school itself.		
Has the commun ity ever accesse d local funds	Yes; LDF funds	Yes - through community mobilization	SIP School Improve ment plan	Yes, local development funds that assisted them with materials for the teacher's house.	Yes, MASAF	Yes, LDF and support from world vision to build	Yes they have accesse d funds from EU and LDF for the construction of a school block and funds from the SIP (School Improve ment Plan) for the girls changin g rooms.	Yes, they have received LDF funds, and SIP funds and eagles relief. Eagle's relief support ed the construction of a toilet.	They have been supporte d with materials and technical skill to build some improve d toilets at the primary school. They have used the SIP to bring electricit y to the primary school. They have also been supporte d by world vision to build a toilet.	They have access ed LDF to build the head teacher s house at Livilivi primary school.	They have accesse d LDF and EU funds to help with school construction.	EU, SIP, and Valley (the firm rehabilit ating the railway that runs by the primary school.)

Were women present at the meeting?	Yes; there were 43 women present	Yes	Yes	Yes	Yes	Yes, there were 8 women	Yes	Yes about 50 women were in attendance	Yes, women were present	Yes, women were present, about 20	Yes about 150 women were present.	Women were present during the assessm ent but also a lot of women who are local leaders	Women were present during the assess ment, there were also some female leaders.	A large number of women were present, althoug h they sat apart from the men and assess ment team. They were active in the convers ation and represe nted more than half of the attende es at the meeting	A large number of women were present and participa ted in the meeting .
Was the MG active?	Yes The desk officer at division level supported the program with a powerful motivational speech	Yes	Yes The desk officer at division level supported the program with a powerful motivational speech	Yes The desk officer at division level support ed the program with a powerful motivati onal speech	Yes The desk officer at division level support ed the progra m with a powerfu I motivati onal speech	Yes	Yes	Yes	Yes	Yes very active	Yes very active	Mother groups are very active in the area. They have manage d to break 5 child marriage s in the past 2 years and have also manage d to mobilize	Mother groups are very active in the area. They are mobilizi ng teen mother s back to school. They are also working to end child	Mothers' group was represe nted by a large continge nt. They say they are the sepecial ly in encoura ging girls to remain in school. They make	Mothers' group was present with several member s in attenda nce. The group notes that they work to mobilize girls to go to and remain

										some girls back to school.	marriag es.	visits to village to talk to girls and convinc e them to stay in school. They noted that some girls don't end up returnin g to school but end up remaining involved in school activitie s, neverth eless.	in school. They visit them and their families in the villages and encoura ge girls to attend school regularl y. They noted that the distance to the seconda ry school is far and this is one issue girls raise. They were able to get 3 girls to return to school recently.
Are there any other factors of note?	The proposed site is currently not accessible but a bridge is under construction . A drift bridge.	Mother groups are very active. Holding talks with girls and provide material support. There is a borehole at the primary school but there is no water source at the site identified for	Mother groups are trying to bring teen mothers back to school. Howeve r this is sometim es a problem as some parents	Mother groups are very active	Mother group is very active	Active mother group available	Many parents attended the meeting	Yes, they source learning material s for girls and also hold counselli ng sessions		They conduct home visits to girls who have dropped out of school to find out what is wrong. If they are pregnant they are advised	They conduct home visits to girls who have droppe d out of school to find out what is wrong. If they are	They conduct home visits to girls who have dropped out of school to find out what is wrong. If they are	Village chiefs noted that they coopera te and that the commu nities are very enthusia stic about getting a

			the construction.	are not coopera tive. There are by-laws in the commun ity. Chiefs do not accept child marriag es, they make sure teen mothers are returnin g to school.							to go back to school after a year.	pregna nt they are advised to go back to school after a year.	pregnan t they are advised to go back to school after a year.	school. The head chief noted that, if they are selected , they will not fail as a commu nity.
Church land?	has no issues and was given by the chief of the area who was also present during the meeting. It is a very big piece of land	Land that was available had not been negotiated with the owners and this was exposed as the team went out to do the technical assessment. A second assessment was done on a new piece of land, but the new piece was not accessible by a current road, is a wooded lot, and is located on a site on a hill.	4 sites were identified, one of the sites was church land as such this site was not visited. The other 2 sites are customary land which is in the hands of the community leaders. One of the areas shares a boundary with a graveyard and on the other side with church land. 3rd piece of land was owned by some people who is died son works for radio company. Son not consulted.	2 sites visited. 1st site was very good, close to the school but land is too small. 2nd site good size land, is a wood lot, needs to be cleared about 1.5kms from the primary school. Soils are clay soils on top, needs further	1 site visited, howeve r the site is sloppy. The owner of the land was not present on the day. It is about 100m away from the primary school	The land belongs to the chief who was at the site with his brother, it is a big piece of land. It is at a location that can easily also charter for Nangulukutiche and Ngwengwe schools.  However, it is about 3 kms from the school. Site already has a football pitch.	2 sites identified . 1st belonged to church so not possible. Second land belongs to an individua I who was there	3 sites available, two sites are large and close to the school. Was difficult for us to get to the first site. The owner confirmed that the land is available for the school. 2nd site the owner was not there. 3rd site was too small though closest to the school.		Yes the land identifie d is church land. The project has given the commun ity time to identify alternati ve land.	Three pieces of land were other two pieces of land uplified with the specifications provided. The other two pieces of land were church land and land belongin g to Ministry of Agriculture respectively. The			

			4th land is barrow land.	geologic al survey						land identified is big and flat.		
	Yes	Not suitable.	Yes good land available	Yes	Yes	Yes			Not currently	Yes		
Defining features ?												
					Community leaders presents were VH Mapando 1&2, VH Chikumba,VH Nkangoma, VH Nkangoma 2, GVH Nsamala	Commun ity leaders represen ted by a number of chiefs. The represen tative of the GVH have very strong sentimen ts pleading that the area be consider ed for the initiative and pledging the whole communities support	Community leaders from around the school were present.	Water scarcity at the school. There is no borehole at the primary school.		The community was generally very enthusia stic about the project. The chiefs and MP, PEA and the EDM all lamente difficulties that are being faced by learners in this area to access secondary educatio	This commu nity was probabl y the most enthusi astic of all during the meeting . There was a great amount of particip ation from many particip ants. The women sang, danced, and ululated frequen	

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			Government	Governm	Government		-71			
			officials	ent	officials					
			present; PEA,	officials	present; h/t,					
			H/T, C PEA and	present;	C PEA, and					
			Senior	PEA,	Senior					
			Inspector of	H/T, C	Inspector of					
			Schools	PEA and	schools.					
				Senior						
				Inspector						
				of						
				Schools						

					Councilor Botomani, VDC members, school committee, VDC and ADC representatives and mother groups	Local leaders, DC, Mother group, school committe e, PTA were all represen ted	Local leaders, VDC, ADC, mother group representativ e, PTA school management committee, and parents were all present at the meeting. I was a reasonable gathering of about 150 people							
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Table B. Technical assessment results for Balaka Schools for 1 round assessment

	Approved	rating	Notes	paired with	Rejected	Rating	Notes
1	Makanjira	90	Large site 1.5km away from primary school. ACTION: The choice of land is natural woodlot, need to verify with USAID if this will conflict with EMMP standards.	-}	Chiyendausiku	89	Site strongly preferred by EDM, DEM, and CPEA due to central location in zone. There is an existing one school block newly constructed with support from LDF. Proposal to convert to two teachers' houses.
					Ng'onga	78	Land is on a slope and access to the site will require the access road to be graded.
					Chinkhumbe	75	The land is a dumped limestone/crinker site.
2	Mitengwe	83	Large site, however, the land owner's intentions for giving out the land are questionable. Action: Need to redo the site assessment.	-}	Nangulukutich e	87	Land shares boundary with a graveyard. Action: need to consult the community to provide another piece of land.
3	Chilanga	90	The site was a first choice for the team. The site is not collocated with PS.	>	Ngwengwe	80	The site is rocky and the owner was not around during site assessment.
					Chikoleka	85	The site has no problems except that land is in a natural woodlot. Could conflict with EMMP standards.

4	Njerenje	86	Large site. Action: Conduct geotechnical investigations to determine the type of soil below the black cotton soils.	>	Thundu	86	EDM, DEM and CPEA's choice was Njerenje because of its central position to feeder schools.
5	Namichere	89	The site was a first choice for the team due to very strong community support demonstrated at meeting and through work done to prepare for school.	>	Muthe	89	The site is large, has good soils though will need verification of site boundaries since it shares boundary with land belonging to catholic church
6	Namikombe	89	During rainy season, the site may be difficult to reach because of slippery roads since the general soil formation of the whole area is black cotton soil. Action: Geotechnical investigations need to be carried out to determine the type of soil below the black cotton soils.	>	Ntalikachao	79	The site is a catchment area for Njira project. It contains water ditches which are used for controlling flow of water downstream of the site and also recharging the water table. May be environmentally and socially unsuitable for use.

Table C. Community assessment results for Balaka second round assessment

	District - Balaka										
Criteria for comparison	1	2	3								
School Name	Mzimundilinde	Chawanda	Njese								
Zone	Nkhonde Zone	Chiendausiku Zone									

Date of assessment	1st June 2018	31st May 2018	1st June 2018
Enrollment	Total 531 girls - 269 boys -262	Total - 511, girls - 244, boys – 267	
Number of villages which feed into the school	42 feeder villages	10 feeder villages	
What is the farthest village, and how far?	Jackson is the farthest school and is 13kms away	Tchaidon village is the farthest village and is 5kms away from the school.	
Closest CDSS	Chembera CDSS which is 15km away	St Louis CDSS is the closest secondary school to the primary school and is about 25kms away from the primary school. This CDSS is at Balaka boma.	
How many children sat the PSCLE last year	Sat for PSLCE - 26 learners, boys - 16, girls - 10,	Sat for PSLCE Total - 9, Boys -6, Girls - 3	
How many children passed	Total passed 26, boys -16, girls -10	100% pass rate	
How many children were selected for secondary school?	6 learners were selected, 4 girls , 2 boys	Selected Total - 6, Boys - 4, Girls -2	
How many children are still going	20	3	
what are the reasons for drop out	Lack of school fees, early marriages, Long distance to school	None. There is a lot of effort from the mothers groups and village bylaws from chiefs which is helping to keep children in school.	
What happens to children who are not selected?	Some never return to school, some repeat, some go to private schools, others go to open day secondary school	some go to private schools, others go to open day secondary school	

What is the community trying to do to address these problems?	The community established bylaws, developed a proposal for CDSS construction, mother group currently mobilizing girls	Supporting development works at Chiyenda Usiku where the community proposed to have a CDSS	
Has the community ever constructed any buildings?	Yes; Teachers houses, school library and school block	Yes, the community has constructed teacher's houses and school blocks.	
Has the community ever contributed to the construction of school blocks?	Yes; they contributed sand, bricks and water	Yes, they contributed sand, bricks and water	
House	Yes; at Chiendausiku primary school	yes , two teachers houses	
How long did it take them?	3 months	1 year	
Is the community ready to construct more teacher's houses?	Yes	Yes , If all construction materials are available	
What are the factors that affect this building?	lack of water	Insufficient water supply	
Has the community ever accessed local funds	Yes; SIP, Roman Catholic, Save the Children	Yes - EU, MASAF, GUC,SIP, from their MP (Mr. Mpaweni)	
Were women present at the meeting?	Yes	Yes	
Was the MG active?	Yes	Yes they were very active in mobilizing girls to go to school	

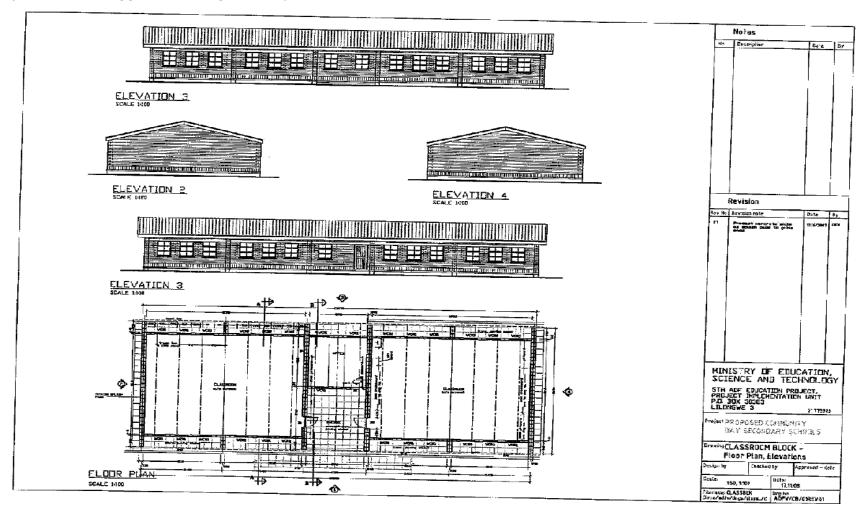
Are there any other factors of note? Church land?	two sites were proposed by the community however one site was not assessed since it is church land, The other site is 4km away from the school but is bordering another primary school	some learners who are selected to St Louis hold a self-boarding which is a threat to their welfare  Two sites were assessed provided by the chief and a community member respectively. The first site was big enough to accommodate all the structures however the only drawback	
	but is bordering another primary scribor	was that it was sharing boundary with a Seventh day Adventist church which might pose problems incise of future expansion. in addition this site was close to a maize mill some 250m away and noise was heard during the assessment hence the studies might somehow be affected due to noise	
	second site is the preferred site for the school construction	second site is preferred to the other one	
Defining features?			

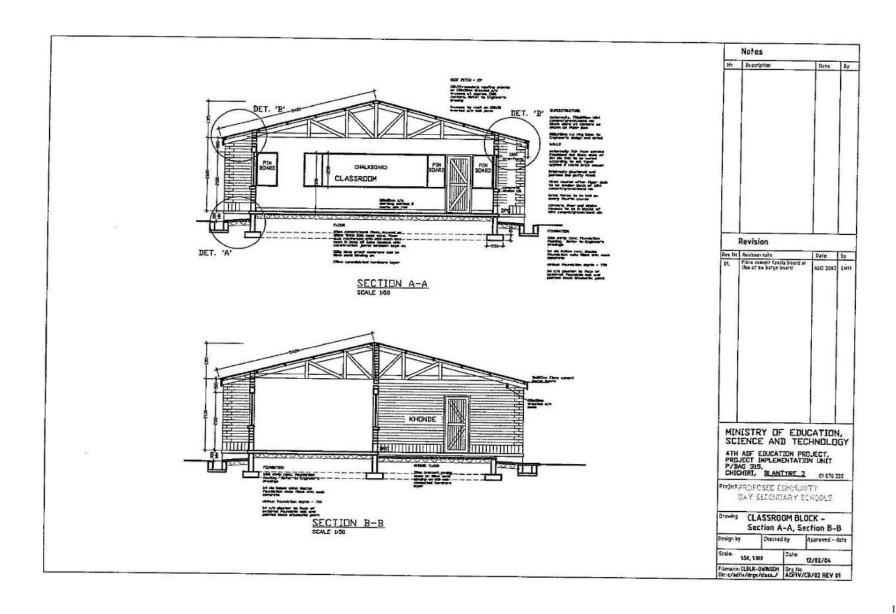
#### Table d: Technical assessment results for second round assessment

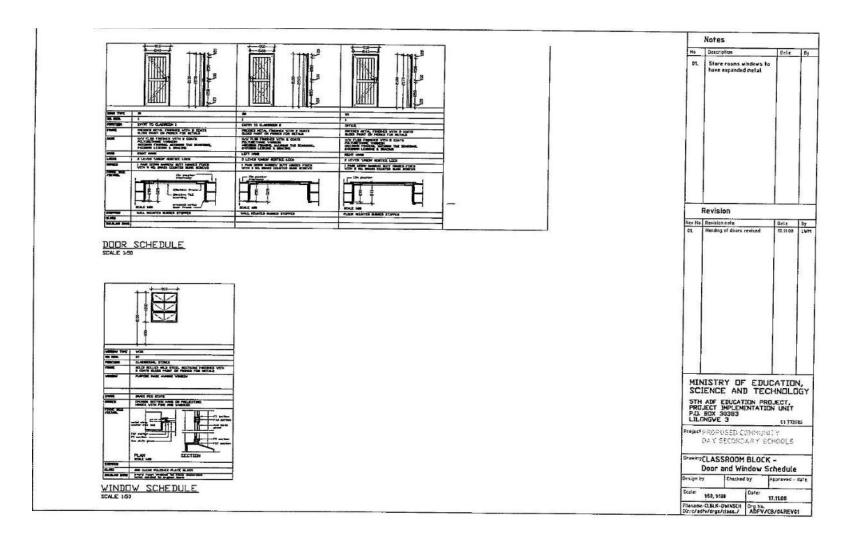
	Approved	rating	Notes	paired with	Rejected	rating	Notes
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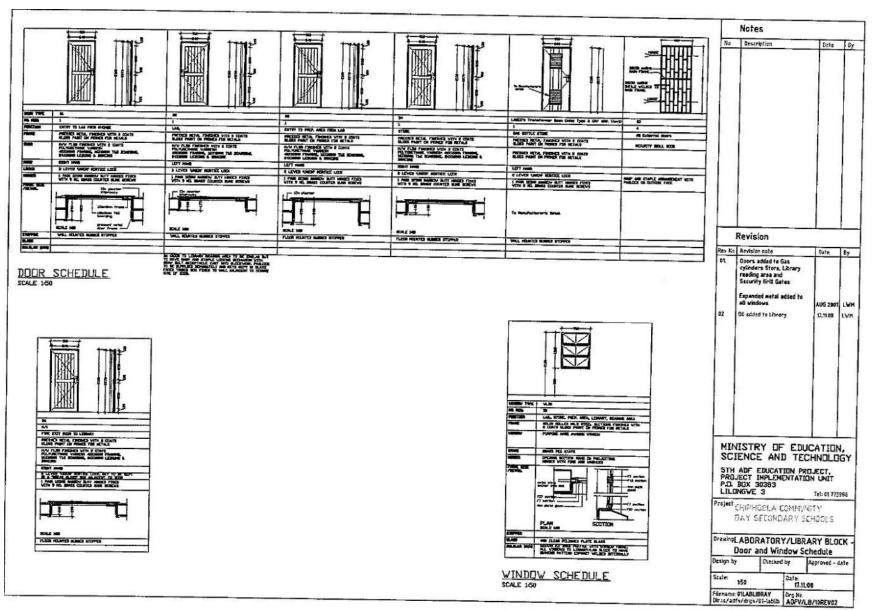
Mzimundilind e	86	Large site enough for all structures and future expansion, 4 km away from another primary school. ACTION: The land selected is slightly far from the proposed school but close to Junior primary school need to verify with USAID. However this is the site that the EDM preferred since there is no CDSS close by this school and is centrally positioned for all the feeder	>	Chiwanda	85	Two sites were assessed. First site was technically ok with flat terrain and with enough space however the site was surrounded by a church which we foresee that this might hinder future extensions in addition there was a maize mill in a distance of 200m away which might disrupt learners due to noise  The second site was big enough, flat terrain however the EDM preferred Mzimundilinde
		schools so it might assist the children in the nearby communities		Njese	0	There were ownership issues on the land that was allocated. There are people residing in the proposed land and there were quarrels amongst community members on the proposed land

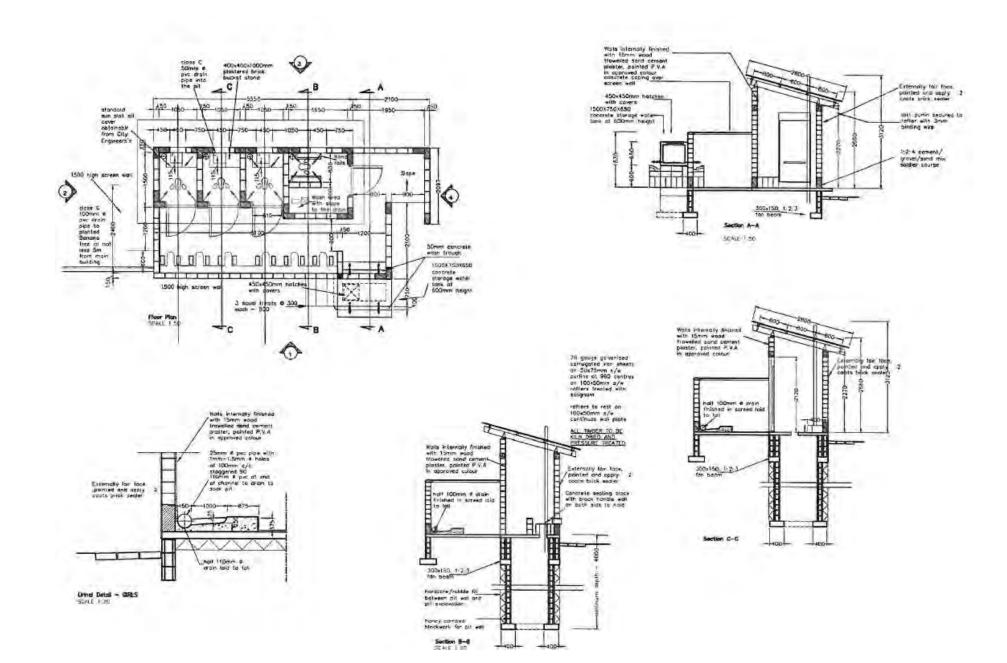
#### 8.4 ANNEX D: CDSS PRELIMINARY SCHEMATICS

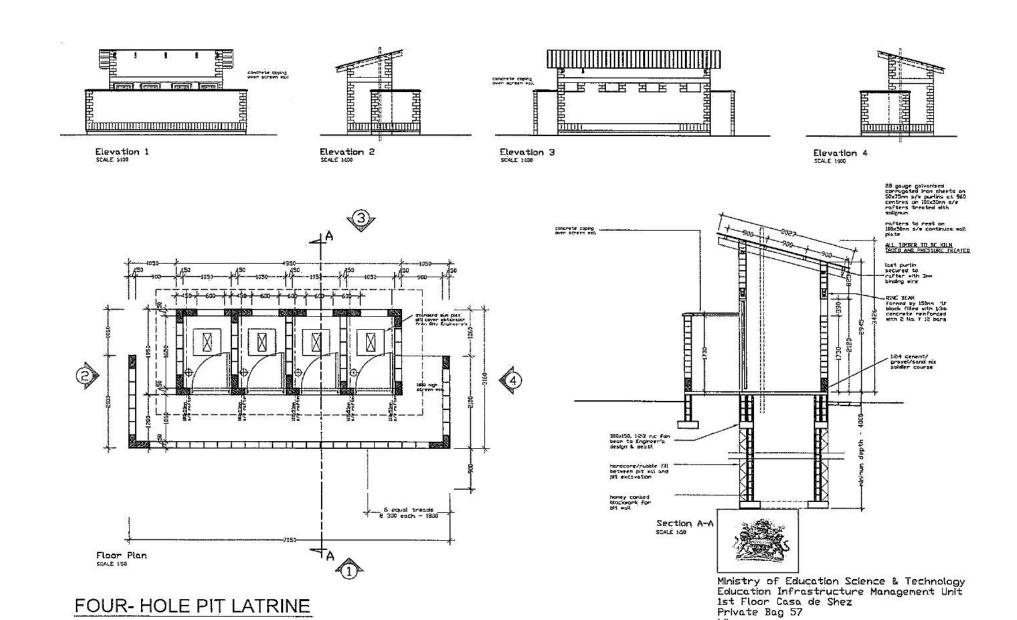










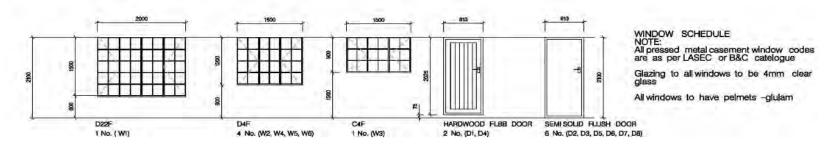


FOUR-HOLE PIT LATRINE

Lilongwe

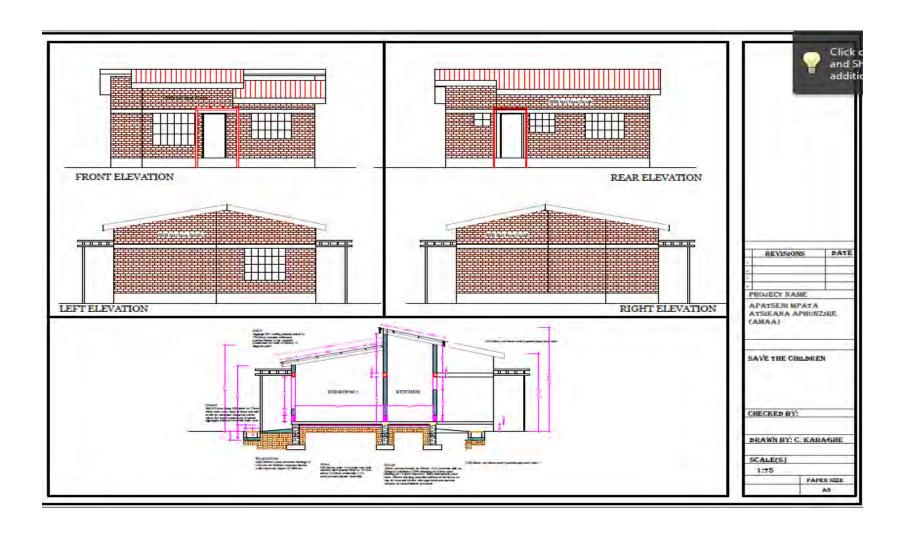
## 8.5 ANNEX E: PRELIMINARY TEACHER HOUSING SCHEMATICS

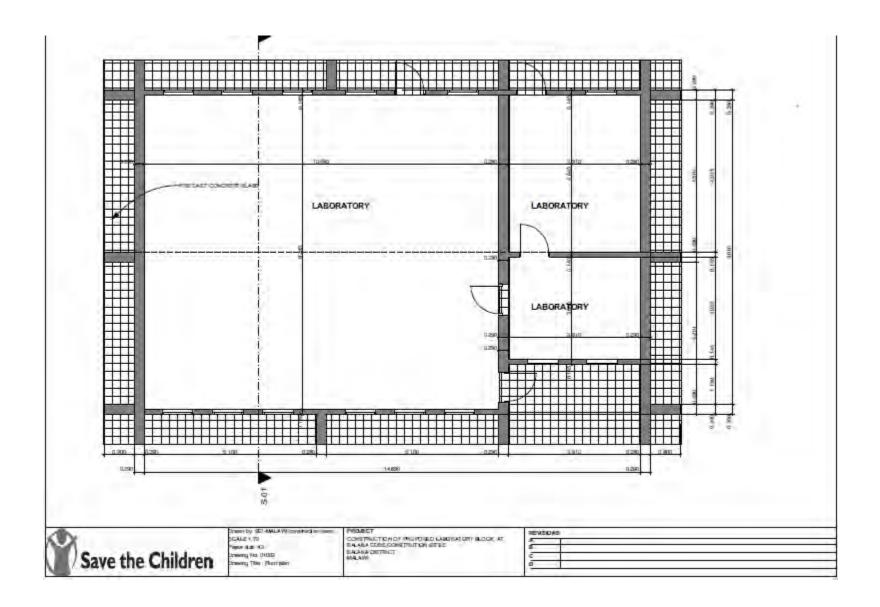
WINDOW /DOOR SCHEDULE

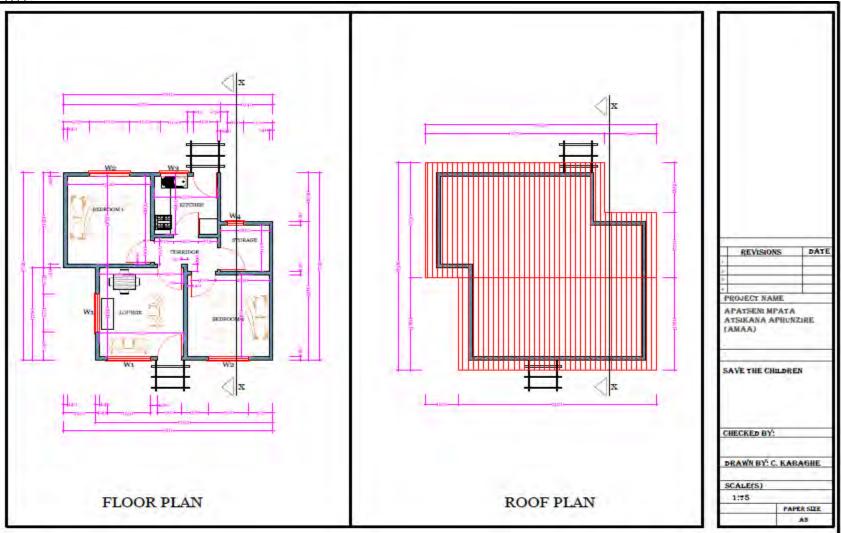


DOOR	SCHEDUL	E				
	OTY	WALL THICKNESS	HAND	DOORFRAME	TYPE OF DOOR	LOCATION
D1, D4	2	6" (150mm)		1.2MM THK STD PRESSED METAL, SUITABLE FOR DOORS OF SIZES 2030 X 813mm	GLULAM /HARDWOOD FLBB	LOUNGE, KITCHEN
D2, D3, D5, D6, D7, D8	6	6" (150mm)		1.2MM THK STD PRESSED METAL SUITABLE FOR DOORS OF SIZES 2030 X 813mm	SEMI SOLID FLUSH	DINING, KITCHEN, MAIN BEDROOM, BEDROOM 2, BEDROOM 3, CORRIDOR

PROPOSED HOUSE FOR SAVE THE CHILDREN	N/TB	Self TOR	don m.	
INTERNATIONAL	Carrie Month Tech Mo. 578		SCHEC04	
WINDOW /DOOR SCHEDULE	checked by		-94.	







#### 8.6 ANNEX F: LIST OF PRESCRIBED PROJECTS FOR WHICH AN EIA IS MANDATORY

List of prescribed projects as prescribed under section 24(1) of the EMA, the types of projects for which an EIA is mandatory are provided in List A. List A: List of projects for which an EIA is mandatory.

#### Al Agriculture/aquaculture projects

- 1. Agricultural drainage projects of more than 1 ha.
- 2. Irrigation schemes designed to serve more than 10 ha.
- 3. Land development for the purposes of agriculture on greater than a 20-ha land holding.
- 4. Agricultural projects necessitating the resettlement of 20 or more families. Any change from one agricultural land use to another on greater than a 20-ha land holding.
- 5. Use of more than 1 ton of fertilizer per hectare per annum on greater than a 20-ha landholding, except for lime applications.
- 6. Use of the following concentrations of pesticides on greater than a 5-ha holding:
- More than 5 l/ha of ultra-low-volume pesticides per application; or
- More than 1 I/ha of aerial application of pesticides; or
- More than 20 kg/ha for each application of granular pesticides.
- 7. Construction of fish-farming or ornamental pond(s) where the capacity is greater than 100 m3 or where there is any direct discharge from a fishpond to a receiving water body.
- 8. Any proposal to introduce fish species in an area where they do not presently exist.

#### A2 Projects in the food and beverage production industry

- 1. Construction of new abattoirs or slaughtering houses with a capacity of greater than 100 animals/day and expansions to existing abattoirs or slaughtering houses to a capacity of greater than 100 animals/day.
- 2. Construction of new canning and bottling operations with workspace of greater than 5000 m2 or expansion to an existing canning or bottling operation to a workspace of greater than 5000 m2.
- 3. Construction of new breweries and distilleries with a production capacity of greater than 25 000 liters per day, or expansions to existing breweries or distilleries to a production capacity of greater than 25 000 liters per day.
- 4. Construction of new sugar production operations or expansions to existing sugar production operations by greater than 10 percent.
- 5. Construction of or expansions to tea or coffee processing industries.

#### A3 Water resources development

- 1. Construction or expansion of groundwater utilization projects, where the utilization will be greater than 15 1/s or where the well is 60 m or deeper.
- 2. Construction of new water pipelines or canals longer than 1 km, or expansion to existing water pipelines or canals by longer than 1 km, where the cross-sectional area is greater than 20 m2 and the volume of water to be carried will be greater than 50 m3 per second.
- 3. Water pumping stations adjacent to lakes, rivers and reservoirs that withdraw more than 2 m3 per second
- 4. Drinking water supply schemes to serve a population of greater than 10 000 people, or expansions of existing schemes to serve such a population, or water reticulation networks with more than 10 km of pipeline.
- 5. Area of greater than 100 ha, or expansions of existing reservoirs by greater than 500 000 liters or greater than 100 ha.
- 6. Construction or expansion of dams with a height of 4.5 m or higher.

#### A4 Infrastructure projects

1. Construction of new sanitary sewerage works, or expansion of existing sanitary sewerage works, to serve a population of more than 5000 people.

- 2. Construction of new storm sewerage works, or expansion of existing storm sewerage works, to drain an area of greater than 10 ha.
- 3. Any new sewerage outfall to a receiving water body or location of sewerage systems or septic tanks within 1 km of a water body.
- 4. Construction or expansion of septic tanks servicing more than 100 people or 20 homes or which receive more than 100 m3 per day of wastewater.
- 5. Construction of new highways and feeder roads or expansion of existing highways and feeder roads.
- 6. Construction of new airport and airstrips or expansion of existing and airstrips and their ancillary facilities.
- 7. Construction of hospitals with a bed capacity of greater than 200 beds, or expansions of existing hospitals to a capacity of greater than 200 beds.
- 8. Construction of new or expansions to existing railway lines.
- 9. Construction of new or expansions to existing port or harbor facilities.
- 10. Establishment or expansion of industrial estates.

#### A5 Waste management projects

- 1. Establishment or expansion of any of the following hazardous waste management facilities:
- i. Incineration plant
- ii. Off-site recovery plant
- iii. Off-site waste disposal facility
- iv. Off-site storage facility
- v. Landfill site
- 2. Establishment or expansion of any of the following municipal solid waste management facilities serving a population of greater than 1000 people:
- i. Landfill site
- ii. Incineration facility
- iii. Composting facility
- iv. Recovery/recycling facility
- v. Waste depots/transfer stations
- 3. Establishment or expansion of on-site waste treatment facilities.

#### A6 Energy generation, transmission and storage projects

- 1. Construction or expansion of electrical generating facilities designed to operate at greater than 4 MW or, in the case of hydroelectric generating facilities, where the total head is greater than 20 m or where there is a firm flow of 100 m3 per second.
- 2. Construction of electrical transmission facilities operating at a voltage of 132 kV or greater.
- 3. Construction or expansion of oil and gas pipelines longer than 1 km.
- 4. Construction or expansion of storage facilities (excluding services station) for oil, gas, petrol or diesel, located within 3 km of commercial, industrial or residential areas and with a storage capacity of 500 000 liters or more.
- 5. All activities associated with nuclear power development.

#### A7 Industrial projects

- 1. Construction of and expansions to industries involving the use, manufacturing, handling, storage, transport or disposal of hazardous or toxic chemicals, as regulated under the hazardous chemicals regulation under the EMA.
- 2. Construction of, or expansion to, any of the following industrial operations:
- i. Tanneries
- ii. Pulp and paper mills
- iii. Lime plants
- iv. Cement plants
- v. All types of smelters
- vi. Soap and detergent plants
- vii. Fertilizer manufacturing operations

3. Construction of textile manufacturing operations (including carpet-making) which consume greater than 5000 m2 of surface area, or expansions to existing textile manufacturing operations to a capacity of more than 5000 m2.

#### A8 Mining and quarrying projects

- 1. All mining of minerals, expansions to mines, mining exploration activity, minerals prospecting activity, quarries, gravel pits and removal of sand or gravel from shorelines, except for those activities that have received a project-specific exemption under subsection 26(3) of the EMA, signed by the Director for Environmental Affairs and co-signed by the Director of Mines.
- 2. Explosives manufacturing
- 3. Extraction of topsoil or the expansion of such an operation, when the operation or the expansion is greater than 0.5 ha or when the depth of a pit to burn bricks from the topsoil is deeper than 3 m.

#### A9 Forestry projects

- 1. Establishment or expansion of logging operations covering an area of greater than 50 ha.
- 2. Establishment of or expansions to existing logging operations on hillsides with a slope of greater than 10 percent, covering an area of greater than 10 ha, or any conversion of forested land with a slope of greater than 10 percent to another land use on greater than 10 ha.
- 3. Establishment of logging or conversion of forested land to another land use within the catchment area of reservoirs.
- 4. Establishment of forest plantations of greater than 50 ha.

#### A10 Land development, housing and human settlement projects

- 1. Establishment of or expansion to an existing housing development of a size greater than 5 ha or where more than 500 people are intended to be housed.
- 2. Resettlement programmes for 500 or more people or the creation of refugee camps intended to shelter 500 or more people.
- 3. Filling in water bodies for the purposes of land development, where the surface area of gross fill deposit is greater than 50 ha.
- 4. Land reclamation projects greater than 100 ha.

#### A11 Remedial flood and erosion control projects

- 1. Construction of breakwaters, seawalls, jetties, dykes and groynes of greater than 2 m in height or 1 km in length to remedy shoreline erosion or flooding.
- 2. Construction of dams or weirs with a height of greater than 2 m, or which divert more than 20 m3 per second, or any bypass channels or channel realignments to remedy riverine erosion or flooding.
- 3. Shoreline stabilization projects where the shoreline involved is greater than 50 m.

#### A12 Tourism development projects

- 1. Construction of resort facilities and hotels with a capacity of more than 50 people, or expansions to existing facilities by a factor of greater than 50 people.
- 2. Construction of safari lodges and operations with a capacity of more than 50 people, or expansions to existing facilities by factor of greater than 50 people.
- 3. Construction of marine facilities with more than 10 boat slips, or expansion of existing marine facilities by more than 10 boat slips.
- 4. Development of tourism master plans that have several projects associated with them.

#### A13 Projects in proximity to or which have the potential to affect:

- 1. Areas of unique historical, cultural, scientific or geographical significance or which have received World Heritage designation
- 2. National parks, game reserves and protected areas
- 3. Wetlands
- 4. Water bodies
- 5. Flood zones

- 6. Major sources of drinking water, including communal wells
- 7. Cemeteries or ancestral shrines
- 8. Residential, school and hospital areas, as designed in local planning documents

# A14 Major policy reforms for example:

- 1. Deregistration of forestry reserves
- 2. Changes to zoning plans
- 3. Proposed introduction of exotic species

Sourced from: http://www.saiea.com/dbsa\_handbook\_update2012/pdf/chapter08.pdf

# 8.7 ANNEX G: LAND TENURE FORMS

## **MZIMUNDILINDE**

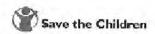
# Save the Children LAND TENURE AGREEMENT FORM

Ine ARATI COSAR ndikutsikiza kuti no okula ARA ha ku boma la Balaka kuti pamangidwe Maratikiza kuti no okula ARATIKA KATI NA K	Iapeleka malo
Ndikutsikimiza kuti kuyambira lero pa tsiku la 21mwezi wa	m'chaka Izaletse chitukuko
Wosainira: LAITI GOGUSH Bills  Mboni: Akimu JAMOS A. Ly  Date: 21/06/2018	in the second
Wosainira kuimira district council:  Mboni: MIZECU SAMIKWA GOODIWA  Date: 21/06/2018	(65 No. 2018
Wosinira kulmira bungwe la save the children:  Mboni: Martin MUTABAZI; SCI CouAruche	a supervisor
Date 21/06/2018	

# Save the Children

# MGWIRIZANO WOSINTHANA MALO

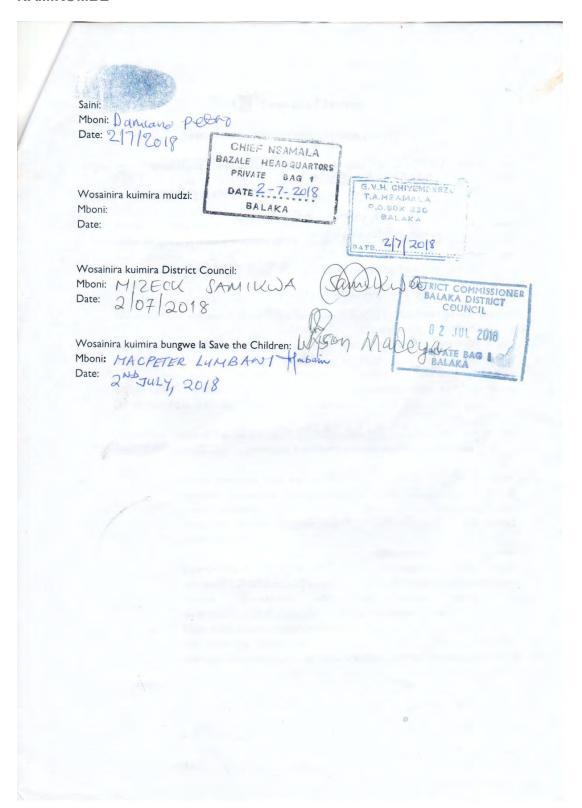
Migwirizano wosinthana mafo ukuchitika pa tsiku la ili niwezi wa hilasi niki ka cha 2018 pakati pe a
M'orienemo ridiye kuci a Middigastisa Tara saya ndi mwinji wake wa gawo fa malo ena amene ali ku Mazara Jar
painingidwe
Minetensu ndive kuti mudzi wa ZAGOROWA Walio wa malo opezeka kwa ZAGOROWA ZE wakula kwa malowo nkukhata
malowa akuperekediwa kwa a a Managaraka kwa majowo nkujenara najowo nkujenara anaporokadiwa kwa panaraka kwa majo amene anaporokadiwa kwa panaraka kwa majo amene anaporokadiwa kwa panaraka kwa majowo nkujeniya najowo
anaperokadwa kuti pamangidwe (LATA) anaperokadwa (Cominantiy Day Secondary School Malowa amene aperekedwa kwa a (CACA) JACA(Do pachiyambi anali malo Mumu 
Minenemu ngekuti a Mishyatil Mingantan indi mudzi wa Mingantan kusinthana malowa atamwana zotsatirazi:
i- Mudzi wapereka malo kwa a MACA ACA MARANIE Jeffe for malowa akupezeka owa MACA ACA kulkula kwake nkukhala:
ii- Malo amene aperekedwa kwa a 1995 (3000) amene kuchokwera kwa mudzi wa 1905 (3000) and wokula mofamana kapena
Margar Compareks dwa ndi n
iii- Ngati aralo ameno akuperekedwa ndi a pali zomunga, mudzi wa ubwezenetsa zomangazo sa malo atsopaño ameno aperekedwa kwa a

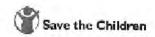


# LAND TENURE AGREEMENT FORM

Ine Fewdex Kombug
Ndikursikimiza kuti kuyampira lero pa tsiku la
Wosainire: FEW DEX KAMOWA BAZALE MEADQUARTERS Mboni: JAMES MENSULC Date: 10/05/2018  CHIEF NSAMALA BAZALE MEADQUARTERS 10 MAY 2018  P/BAG 9-BALAKA
Wosainira Kulmira District Council:  Mboni: MIZECK SAMIKWA SUNGYWOJO  Date: 10 05 2018
Wosainira Kuimira bungwe la Save the Children: T. Okimphamba &  Mboni: DANIE NSEREBO I T DEM FOR BALAKA  Date: 10/05/2018

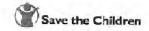
#### **NAMIKOMBE**





# LAND TENURE AGREEMENT FORM

School.	
Ndikutsikimiza kuti kuyambira lero pa cha	a tsiku la 8
Wosainira: MOFOLO A Mboni: MANGEL LAPE Date: 08/05/2018	BAZALE HEADRUARTERS  8 MAY 2018
Wosain ra Kuimira District Council:  Mbori: M17.E CU SAM (	KWA SAMAKA
Date: 8/05/2018	S (NW 1501B
Wosainica Kuimira bungwe la Save the	Children: T. Chimphamba Too
Mboni: MS. D. ACUFANDII Date: 08/05/2018	
Date: 0 8/05/2018	



LAND TENURE AGREEMENT FORM
Ine
Ndikutsikimiza kuti kuyambira lero pa tsiku la <u>li</u> <u>nwezi wa Moki</u> , m'chaka cha <u>a n S S</u> , malowa sali mmanja mwanga ndipe sipadzapezeka tsiku lomwe ndizaletse chitukuko chomanga Community Day Secondary School.
Wosainira: ARON CHAPAURANANANANANANANANANANANANANANANANANANA
Wosainira Kuimira District Council:  Mhoni: HIZECK SAMIKWA KUMA  Date: 11/65/2018
Wosainira Kuimira bungwe la Save the Children: T. Chimphamba For Mboni: Davie ACERED & L. I Dom For Balanca Dane: 11/05/2018

## Note on Compensation and Land Issues in Malawian Schools Project

## By Caleb Stevens, USAID/E3 Land Office

#### 3/20/2017

## **Background**

USAID is supporting the construction of schools in rural Malawi. The schools were given ownership of the land—in some cases decades ago. Ownership prior to allocation to the schools is unknown. In Malawi compensation in this situation is unusual, and it is important to manage expectations around compensation. However, some of the land upon which the schools will be sited are used for farming. Communication and consultation processes are unclear. The following questions remain:

- 1. What are the rights of the current occupants with respect to compensation?
- 2. Should the current occupants be compensated?
- 3. Who should compensate the current occupants since USAID did not buy the land?
- 4. What are the compensation requirements under Malawian law?

The focus of the inquiry on displacement and compensation issues should be on legitimate landholders, including secondary or informal occupants and users of the land. This is consistent with good practice found in the World Bank Operational Policy, the Voluntary Guidelines on Responsible Governance of Tenure, and USAID's Guidelines on Compulsory Displacement and Resettlement. "Ownership" and tenure type is only part of this analysis. The key is determining who is currently using the land in a way considered legitimate by the local community. The preferred means of compensation, if called for, is comparable land -- not cash.

If Malawian statutory law applies a weaker standard, then these other standards should apply.

## **Malawian Statutory Law**

Malawian statutory law and formal policy recognizes three types of land: public, private, and customary. Customary land is vested in the President and held in trust on behalf of the people of Malawi, but is managed and administered by customary traditional authorities.

#### If Customary Land

Because an estimated 65 to 75 percent of land in Malawi is customary land, we might assume that the land is customary. Customary land can be individualized in the name of particular families and community members but this is in the form of an exclusive, perpetual right to use the land with the right to lease and pass the land through inheritance.

In September 2016, a new Land Bill was enacted into law, replacing the 1965 Land Act. The 2016 Land Act changes community governance and decision-making around allocation of land. Previously, authority was vested in the chiefs and village headmen. Now decisions about land are made by land committees and land tribunals, but approval of the chiefs and headmen is required.

We might assume that the "ownership" of the land by the schools was granted by chiefs and the local village headman as an individualized, perpetual use right, but the land remains within the community.

Similarly, any secondary farming on the land occupied by the schools would be with the consent of the local traditional authorities.

As far as I can tell, Malawian statutory law is silent on what compensation is required for lost land and assets when internal, customary land allocations are made by traditional authorities. It may be as simple as the chief or village headperson granting new land to the secondary user farmers.

#### If State Land

State acquisition of land, whether private or customary, is governed by the Constitution as implemented by the Land Acquisition Act (a replacement law is pending). In practice, once a project is approved and funding secured, the compensation process begins with sensitization meetings between the government and traditional authorities. An assessment is conducted and compensation paid. Compensation can be in cash or kind. In the case of cash compensation, it is unclear whether compensation is paid to the traditional leader, for transmission to the community member user of the land, or paid directly to the community member.

However, per a World Bank assessment, compensation is usually not paid to landholders in a timely and fair manner. Further, for customary land, "[i]n calculating compensation, land is considered of no value and the valuation only reflects improvements on the land" (Jere 2012). Thus, even under these inadequate compensation standards provided by Malawian law, the users are entitled to compensation for agricultural improvements, including crops, if the land was acquired by the state prior to allocation for schools.

#### **Donor Standards**

Because Malawian law has lax compensation standards, World Bank projects in Malawi that require displacement exceed the legal requirements. The World Bank compensates all legitimate landholders for lost land and assets, valuing customary and private land in accordance with equal standards, even compensating for illegal constructions (i.e. squatters). Notably, providing alternative, comparable land is preferred over compensation.

This is consistent with USAID's Guidelines on Compulsory Displacement and Resettlement (CDR Guidelines). They recommend compensation for "landholders whose rights or claims are recognized as legitimate by customary or traditional authorities . . . ." The Guidelines also frame compensation as a counter-risk strategy to improve livelihoods, for instance by mitigating the risk of landlessness with alternative land of greater value.

#### **Possible Way Forward**

If the land upon which the schools are sited is public land, then USAID could work with the government to ensure alternative land within the community is found as compensation. Similarly, if the land is still customary land, then USAID should work with the community to ensure alternative land of comparable value is found for the secondary user farmers. This is what the World Bank would do and is in keeping with USAID's CDR Guidelines.

#### **Sources**

Interview with Malawian Minister of Information, Communications Technology and Civic Education, available here: <a href="http://landportal.info/news/2016/09/malawi-new-land-laws-empower-chiefs-people">http://landportal.info/news/2016/09/malawi-new-land-laws-empower-chiefs-people</a>.

USAID. Country Profile: Malawi (August 2010).

Jere, Paul. Improving Land Sector Governance in Malawi: Implementation of the Land Governance Assessment Framework (2012).

Stevens, Caleb & Dear, Chad. Guidelines on Compulsory Displacement and Resettlement in USAID Programming (2016).

World Bank Operational Policy 4.12.

#### 8.10 ANNEX I: CONSTRUCTION RISK MANAGEMENTS

Construction Risk Management
A Mandatory Reference for ADS Chapter 201
Responsible Office: PPL

This Construction Risk Management Mandatory Reference requires that, during the activity planning stage, all USAID operating units must explicitly identify all construction activities and sub-activities performed under acquisition, assistance, PIO grants or G2G mechanisms. A risk screening of each identified construction activity or sub-activity must be performed and documented by the operating unit prior to construction implementation. The following paragraphs describe definitions, background and guidance for identifying construction activities and performing construction risk screening.

#### I. Construction Risk at USAID

Construction is an integral part of the Agency's practice and development portfolios worldwide. In 2014, a comprehensive survey and assessment of construction activities across the USAID portfolio identified construction activities in nearly every operating unit in the Agency. Since 2014, the estimated construction underway at any one time has averaged more than \$2 billion. The assessment concluded that where USAID identifies construction activities early in the program cycle, performance is generally good and risk is relatively low. Fundamentally, good planning leads to appropriate resource allocation, which facilitates implementation, enhances sustainability and improves health and safety through implementation. USAID policy (ADS 201) requires early identification of planned construction activities, construction risk screening and appropriate mitigation.

The term "construction" is specifically defined in the Federal Acquisition Regulation, but in general, construction is a specific type of activity that involves creating, modifying or demolishing physical infrastructure such as a school, clinic, well or road. For purposes of the construction policy at ADS 303 and 304, when selecting the choice of instrument, USAID defines 'construction' as the "construction, alteration, or repair (including dredging and excavation) of buildings, structures, or other real property and includes, without limitation, improvements, renovation, alteration and refurbishment. The term includes, without limitation, roads, power plants, buildings, bridges, water treatment facilities, and vertical structures." The policy defines "Improvements, renovation, alteration and refurbishment" to include "any betterment or change to an existing property to allow its continued or more efficient use within its designed purpose (renovation), or for the use of a different purpose or function (alteration)." The definition further includes items such as improvements to or upgrading of primary mechanical systems, and excludes others such as non-structural, cosmetic work, such as painting. This definition only includes construction activities and does not include ancillary or other related activities such as architectural and engineering design or construction oversight.

Consideration of construction risk extends beyond activities performed under acquisition. Construction activities performed under assistance (grants and cooperative agreements) as well as through Government-to-Government (G2G) agreements and grants to Public International Organizations (PIOs) must also be identified based on the preceding definition and assessed per this guidance. (See USAID Implementation of Construction Activities).

Construction activities are generally designed to facilitate the delivery of services like education (schools), energy (generation systems and transmission lines), potable water (wells and pipelines) and healthcare (hospitals) to name a few. Construction activities differ from other types of development activities in the way they are planned, procured and implemented. Specifically, construction must be preceded by engineering / architecture design, procured in compliance with specific regulations and policy, and then managed and independently inspected from beginning to end with qualified technical expertise and specific controls.

The 2014 Construction Assessment identified 11 critical success factors for USAID construction activities. These success factors serve as the foundation for the Agency's construction risk management approach and are briefly described below:

- 1. Project Definition Realistic assessment and approval based on sound technical information.
- 2. Stakeholder Engagement Active participation and support of individuals and organizations required for successful implementation and ownership of construction projects.
- 3. *Procurement Procedures, Contract Types and Approaches* Effective and locally appropriate contract mechanisms that are consistent, balanced, enforceable and well understood by the local construction industry.
- 4. *Institutional Capabilities to Operate and Maintain Investments* Engagement of competent organizations with responsibility and capability to effectively manage, operate, and maintain completed construction projects.
- 5. Health, Safety, Environmental and Social Requirements Ability to address and assure compliance with applicable health, safety, environmental and social requirements.
- 6. Appropriate Design Standards and Technology Technical capability to develop project designs in accordance with applicable standards, using locally appropriate technologies.
- 7. Quality of Cost Estimating and Scheduling Ability to establish realistic budgets and schedules within established levels of accuracy, while accounting for potential contingencies and risks.
- 8. Appropriate Levels of Contractor Qualifications Determination and assurance of required contractor capabilities for successful completion of work within established quality requirements.
- 9. *Risk Management Methodology* Incorporation of consistent and systematic approach for identification, assessment and mitigation of risks.
- 10. Construction Oversight and Quality Verification Assurance of successful execution and completion of construction by a qualified inspector and in accordance with established requirements and standards.
- 11. *Monitoring and Evaluation Process* Established process for assessment of results and the ability of completed projects to achieve project objectives.

#### II. USAID's Preferred Approach to Construction

USAID has identified a preferred approach to implementing construction activities that minimizes construction risk through thorough planning and allocation of Agency resources to design and oversight. The preferred approach represents a benchmark against which operating units should screen their risk.

The principal elements of the Agency's preferred approach are described in the following paragraphs:

- **Perform pre-design/pre-construction analyses**: Analyses performed at the planning stages of a construction activity can help to determine the 'feasibility' of the planned activity and inform design decisions and actions during construction. Critical issues to be considered in a feasibility study or other pre-design/pre-construction analyses include:
  - o Alternatives/cost-benefit analysis: Have project alternatives (including 'no project') been considered and evaluated using cost/benefit analysis? Costs and benefits should be inclusive of findings from all analyses (i.e. environmental and social costs, etc.) and should consider life-cycle costs (including operations and maintenance costs).
  - o *Climate risk*: How might climate change impact the performance of construction/ infrastructure? What should be considered in planning and design to mitigate potential impacts? (See Climate Risk Management for USAID Projects and Activities guidance.)
  - o Gender equity and violence prevention: How might the proposed construction / infrastructure reduce or contribute to gender equity and gender based violence (GBV)? What should be considered in project design & implementation to mitigate potential negative impacts?
  - o Land rights: Have all legitimate landholders been identified and consulted? Are the legitimate landholders uncontested, or, if yes, have all disputes been resolved? Has the use of land for project purposes been secured through legal sale, lease or other means in consultation with all legitimate landholders? (Additional Help: Guidelines on Compulsory Displacement and Resettlement in USAID Programming)

- Local Construction Capacity: Is the planned construction within the local contractor capacity?
   What actions should be considered to strengthen local contractor capability through construction?
   Stakeholder analysis: Have all project stakeholders been identified and consulted in a formal process? Is a system established to receive and address stakeholder feedback and grievances through construction?
- o *Building codes*: Have local building codes been reviewed to determine adequacy (factors of safety, seismic, hydrology, geology, etc.) for use in design? How will Americans with Disabilities Act (ADA) compliance be addressed in design?
- o *Environmental impact*: Have cultural and natural resources impacts of construction and the resulting infrastructure and services been appropriately assessed, avoided and mitigated per USAID Reg. 216 requirements?
- Engage a USAID qualified engineer when available and where appropriate for project management: The USAID manager of engineering and construction activities or sub-activities should be a qualified engineer (graduate of an accredited engineering program) who has completed USAID's engineering contracting and construction management (ECCM) training and has a minimum of two-years of experience managing the implementation of construction activities. More stringent experience requirements are recommended for management of large and complex engineering and construction programs.
- Engineering design completed by licensed engineering firm: The engineering design (defining construction requirements, producing the drawings and technical specifications, and preparing the construction cost estimate) should be prepared, reviewed and certified by a locally licensed engineering firm which is ensuring their quality, accuracy and completeness prior to procurement of construction services. The approach for design review, certification and construction must conform to local legal requirements and/or standard professional practice. In some cases, the role of design review and certification can be performed by an appropriate local government agency. The engineering firm should secure a construction permit for the design from the appropriate government agencies or include permitting requirements in the construction contract.
- Include operations and maintenance considerations in the project planning: At the completion of detailed design (or earlier if appropriate), USAID should identify additional resources (financial and human resources) that will be required of the beneficiary/recipient for the operations and maintenance of resulting infrastructure and related services. A determination of the source of these resources should be made and appropriate accommodations (training, management contract, etc.) should be included in the project execution. Per the Foreign Assistance Act, Section 611(e), the host country or recipient organization's financial and human resources capability for operations and maintenance must be certified by the Mission Director or USAID representative for all construction activities exceeding \$1 million in value. (See additional 611e analysis and certification guidance).
- Use a Design-Bid-Build project delivery approach: In executing construction activities, USAID recommends a standard phased approach with discrete, sequential steps for completing (100 percent) engineering design, procurement (bidding) and construction (building). Generally, engineering design and bidding support are achieved through an engineering services contract, and construction is completed under a separate award to a construction contractor. Construction and Architect-Engineer contracting/sub-contracting approach must comply with FAR Part 36 and USAID Construction policy requirements as applicable. Under some USAID implementation approaches (Assistance, G2G, PIO grants, etc.), USAID may not be directly responsible for the selection and management of all elements of construction project delivery. Nevertheless, a design-bid build approach to construction implementation is preferred for all construction activities regardless of the selected overall implementation approach.
- Establish appropriate minimum qualifications and experience for construction contractors: Minimum contractor qualifications must be established to ensure that proposal evaluation will result in the selection of a contractor with adequate financial and technical capacity as well as prior experience performing similar works in similar contexts. Qualification standards should be established by USAID or partner staff knowledgeable of local construction contracting requirements and capacity.
- Firm fixed price contract used for construction: Firm fixed price contracts provide greater cost control on construction projects and can mitigate change orders when a detailed design is used as

part of the procurement documents. Firm fixed price contracting for construction is preferred whether construction is performed under direct contract with USAID or through a different implementation approach (Assistance, G2G or PIO grant) where construction would be performed as a sub-award.

- Include performance bonding, guarantees and warranty requirements in construction contract: Construction contracts should include bonds and/or guarantees to ensure contract completion. Additionally, warranty clauses should be included to guarantee performance of infrastructure for a specified period after completion. All performance bond, guarantee and warranty clauses should be consistent with local professional standards and legal practices.
- Independent engineering firm contracted for quality assurance: Each USAID operating unit managing a construction activity should hold a separate engineering services contract with a qualified engineering firm to perform construction oversight and quality assurance throughout the life of the construction activity. In many cases this is the engineering/ architectural design firm.
- Use fully funded contract mechanisms for construction related activities: The ADS recommends seeking an exception to the maximum length of forward funding (ADS 602.3.3) to avoid funding gaps prior to the completion of a fully constructed activity. It is recommended to fully fund not only the construction contractor, but all engineering related services associated with the project as well.

#### III. Required Construction Risk Screening

The Agency's preferred construction approach is considered the 'least risky' approach for construction implementation and serves as the benchmark for required construction risk screening. Nevertheless, for a variety of programmatic, pragmatic and/or contextual reasons, it may be necessary to deviate from this preferred approach. The operating unit must identify, analyze and evaluate the additional risk accrued through variations from the preferred approach. The operating unit must include the risk screening conclusion (or overall risk rating) in the project files.

Each discrete construction activity (contract, cooperative agreement, G2G activity, PIO grant, subcontract, etc.) should be screened at the lowest distinguishable level (ideally per specific construction contract/sub-contract). Screening is to be initiated and completed by the activity manager as soon as construction is identified as a planned activity. The screening can be updated throughout the life of the activity to improve the risk profile (lower risk) when additional mitigation actions are taken or to decrease scoring when additional risk is perceived.

Risk screening for each construction activity must be filed electronically by the Activity Manager in the Agency's enterprise tracking system (upload to the A&A plan or GLAAS or ASIST) and will become part of the activity performance record. All construction activities will be monitored by USAID engineering staff and technical assistance or other resources will be allocated to manage and mitigate the highest risk activities.

At a minimum, the Construction Screening for each activity must address conformance with, or variation from, each of the principal elements of the Agency's preferred approach described above. The screening should be organized to describe actions taken (or planned) to mitigate construction risk at different stages of activity implementation: Planning, (Engineering) Design, (Construction) Procurement and Implementation.

To facilitate preparation of required construction risk screening, the E3 Bureau has developed and maintains a Construction Risk Estimator tool to guide activity managers through a complete risk screening. Application of the construction risk estimator for a specific activity meets the risk screening requirements set forth in this mandatory reference.

#### IV. Mitigating Risk in the Program Cycle

Elements of planning, design and implementation of construction activities occur throughout the project cycle. Consequently, opportunities to identify and mitigate construction risk also present themselves at different stages. The following paragraphs briefly describe construction risk mitigation opportunities that can be taken at different phases to reduce activity risk.

#### Country/Regional Strategic Planning

- <u>Identify intent to perform construction, type and sectors</u> Identifying the general intent to perform construction activities early in the planning process helps to ensure adequate resources will be allocated and is a requirement of the ADS (Chapter 201).
- <u>Assess operating unit resources and gaps</u> Operating units considering construction activities should ensure there are, or will be, adequate, qualified staff to plan, procure and oversee implementation of construction activities of similar scope and complexity. This may include engineering staff and contracting officers with construction procurement experience. Additionally, anticipated operating unit budgets should be aligned with infrastructure development expectations. Any gaps should be identified and addressed in further planning efforts.
- Perform broad determination of local engineering capacity A broad determination of the local engineering and construction capabilities to affirm that engineering and construction capacity within the host country is adequate to complete anticipated infrastructure works. The determination should consider the type and complexity of the work and use of locally available materials and appropriate technology.
- <u>Identify planned project delivery method (design-bid-build or other)</u> Identifying on a preliminary basis the preferred project delivery method at the strategic level can help avoid confusion and additional risk mitigation requirements at later stages of construction planning and implementation.

## Project Design and Implementation

- <u>Identify source of feasibility analyses</u> During project design, the operating unit should identify the source of all infrastructure/construction feasibility analysis including preliminary studies, required stakeholder mapping and engagement, social assessments, land rights analysis, environmental impact analysis, and climate risk assessment. Where information is not readily available or verifiable, additional USAID-funded analyses may be addressed as part of the activity design process for the construction activity.
- <u>Identify source of engineering design</u> The Project Design should include an independent engineering design as an activity. In cases where engineering design is available from a third-party source (like a host government), quality review and validation of the design by a licensed engineering firm is recommended.
- <u>Procurement planning to phase feasibility analyses, engineering design, construction and quality assurance activities</u> The project design should consider appropriate timelines to allow for completion of feasibility analyses and design prior to construction procurement.
- <u>Initial cost estimation</u> Initial estimation of construction costs should be completed by the activity manager at the Project Design stage. Construction activities and estimated costs must be entered USAID's A&A Plan System.
- <u>Establish contingency plan</u> Operating unit should have a plan to address potential changes or cost overruns. Plans could include financial contingency and change management system to address variances.

## Activity Design and Implementation (Construction Activities)

- Where construction is performed under direct contract to USAID:
  - Prepare firm fixed price procurement package based on engineering design and specifications -Construction contract documents should be based on 100 percent design prepared by third-party engineering firm. Contract documentation should include requirements for appropriate performance guarantees and warranty clauses.
  - o Include construction schedule and cost estimation in contract The schedule and cost should be validated by a qualified engineer. Draft versions may also be included if validation is not available.

- o <u>Include site health and safety plan in contract</u> The health and safety plan should be prepared and validated prior to commencement of construction. The Initial Environmental Examination and Environmental Assessment may contain related requirements.
- Where construction is performed under an alternate implementation approach (assistance, G2G, PIO grant or sub-contract): Ensure that the USAID partner is: using firm fixed price contracts for construction; including an engineer validated schedule and cost estimate in the construction contract or sub-contract; and preparing a health and safety plan for construction activities.

## Monitoring and Evaluation

- <u>Utilize engineering quality assurance reports/documentation to evaluate performance</u> The activity manager should use monitoring and inspection reports prepared by an independent quality assurance contractor (engineering firm) to monitor construction progress. Construction activities must conform to the engineering design unless variances are documented, validated by an engineering firm and approved by USAID.
- <u>Update construction risk screening</u> The activity manager should update the construction risk screening as required to maintain an accurate presentation of the risk profile of each discrete construction activity.

# Marriages Systems in Malawi Control and Ownership of Land under Matrimonial System in Malawi By John Ng'ambi, GEMS Consultant

#### The People

Malawi is a land locked country with an approximate population of about 17 million people, where 60% are women. It shares borders with Tanzania, Mozambique and Zambia. The country is divided into three administrative regions, namely southern region, central region and northern region. Politically, it is divided into four administrative regions, namely eastern region, southern region, northern region and central region. These are further subdivided into 29 districts.

#### **Tribes**

The southern region is not a homogeneous region, with several tribes in this region such as mang'anjas, yaos, lomwes and senas. The southern region mainly practices matrilineal type of marriage; almost all the district such as Blantyre, Zomba, Chiradzulu, Phalombe, Mulanje, Thyolo, Balaka, Mwanza, Neno, Machinga, Mangochi except Chikwawa and Nsanje are the only districts that practices patrilineal type of marriage system.

## **Marriage System**

A majority of the women in Malawi live in the matrilineal marriage system. The major validity requirement for matrilineal marriage system are, first a man and a woman should have personal capacity to marry each other in accordance with customary law or traditional rites of that particular tribe but there is no precise age as to when one will attain adulthood and marry although the constitution is very clear about marriage age. The graduation to adulthood is, in most cases, attained when ones has completed initiation ceremonies and it is not specifically connected to age. The consent or approval of this marriage is in most cases done by the quardian to validity the marriage according to customary laws. Since marriage is a social agreement between two persons, but in order that such marriage may acquire legal recognition under traditional customary law the agreement must be sanctioned by the establishment of marriage counselors. And this court does not recognize any union or cohabitation as constituting a valid marriage in the absence of marriage counselors. In some matrilineal tribes, if a girl or boy was not initiated or a man has not been circumcised, or he lacked capacity to marry, the marriage can be cancelled. Sometimes payments are made; a chicken is an essential payment for the validity of a marriage. It is normally required in the case of an ordinary marriage and the marriage of a pregnant woman. It is returnable in whole or part, if the marriage is terminated by divorce caused by the wife's matrimonial offence

Apart from the essential requirements for a valid marriage, there are some formalities that need to be observed but are not essential in the validation of a matrilineal marriage. These include the assent of parents and elders. In case of a polygynous marriage, consent of the senior wife may be required. In some cases, failure to obtain the wife's consent to marry a subsequent wife has been a ground for divorce because it was regarded as amounting to cruelty.

## **Standard Procedure for Matrilineal Marriage**

The standard procedure for negotiating a marriage under the matrilineal customary law is as follows. A boy and a girl agree to marry. Then, they exchange gifts known as *chikole*. After the *chikole*, they both exchange information regarding the identity of their parents and their maternal uncles. The next step is for the boy to inform his *mwini mbumba* who eventually seeks the opinion of his *nkhoswe wamkulu*. Having obtained the approval of his *nkhoswe wamkulu*, the boy's *mwini mbumba* institutes formal negotiations with the girl's *mwini mbumba*. A further meeting is arranged for a later date to enable the girl's *mwini mbumba* to consult his family elders, and to make private inquiries about the boy's character and family background. At the next meeting, if the boy's proposal is accepted, a convenient date is fixed for the

conclusion of the marriage negotiations, namely, the cohabitation between the spouses. Meanwhile, the boy will be encouraged to visit the girl's home, and will be shown a piece of land on which he is expected to build the matrimonial home. This ends the formal negotiations for the proposed marriage. In some areas, if the marriage proposal has been accepted, a chicken by the boy's *mwini mbumba* is offered to the girl's *mwini mbumba*. The marriage may be regarded as concluded when the girl is handed over by her marriage guardian to the boy, and the parties begin to cohabit.

## Matrilineal Marriage and the Land

When a valid matrilineal customary marriage has been contracted, the husband is expected to go and live with his wife at his wife's village. This is called *chikamwini*. It is a common feature of matrilineal groups in Malawi. Its original intent seems to have been a way of introducing a dependent male laborer into the wife's family unit. In the matrilineal system of marriage, residence for the married spouses is matrilocal. The husband is shown a piece of land on which to build the matrimonial home. They also allocate a piece of land to the newlywed couple to be used for cultivation of crops essential for the subsistence of their family. All the rights in respect of such land, are exercisable only with the consent of the wife's *Parent*. Similarly, land allocated to a wife in her husband's village is subject to the control and interest of the husband's *parent*. However, residence elsewhere *chitengwa* may be permitted at a later stage if the parties are agreeable and the arrangement has the consent of the wife's guardian. However, in real practice, the control of land is in the hands of a husband even though the wife is the custodian of the land. This is however, only practical if the two remain in marriage. If for some reason, the marriage is dissolved, the control of the land reverts to the wife and the man is allowed to go back to his paternal home, leaving behind a house and the land that he was allocated at the time of marriage.

#### Type of Marriage

Matrilineal customary law marriages are potentially polygynous. The husband is allowed to marry more than one wife. On the other hand, a married woman is barred from contracting further marriages for if she remains legally married. Customary law favours the husband regarding sexuality. Women, on the other hand, are not allowed the same opportunities as men. Just like in matrilineal marriages, patrilineal marriages are also potentially polygynous. The husband is allowed to marry more than one wife, but not the wife. Arguably, in both systems, there are case of unfair discrimination because women are treated differently from men. However, one can hardly suggest that the inequality would be addressed if women were given the same opportunity to accumulate men as spouses.

#### **Property Rights**

After the inception of a valid matrilineal customary law marriage, household property, acquired by the spouses, constitutes matrimonial property. This, of course, excludes personal belongings which are exclusively for the spouse in possession of them. Any other chattel, personal or real, is the property of the couple and is subject to the joint control of both spouses. The only qualification to this basic rule is that where it is shown that a particular chattel, personal or real, was acquired by the individual effort of one spouse only, that spouse has ultimate control over the chattel in question. To the preceding, there is one exception. The matrimonial home built by the husband at the wife's village belongs to her as of right. The rule stems from the fact that matrimonial residence for the married couple in this system is local. Here we see an instance where the customary rule works to benefit women at the expense of men. Save as stated herein, matrimonial property will be distributed equitably between the parties upon dissolution of marriage.

#### **Custody of Children**

Under the matrilineal customary law, children born out of the marriage are affiliated to the clan of the female spouse. This is probably the most important feature of the matrilineal customary marriage. This custom, in my opinion, has undoubtedly considerable influence on the way in which the general principles of child's well-being are applied in specific cases.

#### **Divorce**

Marriage in the matrilineal customary law system may be terminated either by a divorce decree pronounced by a court of competent jurisdiction or by death of either spouse or both. In the case of death, the demise of a spouse itself does not terminate the marriage bond. The marriage will subsist until formally terminated at the hair shaving ceremony followed by *msudzulo* that will officially terminate it between the deceased spouse and the surviving spouse. On the other hand, termination by divorce is not complicated under the matrilineal customary law. This will be shown later when grounds for divorce are discussed. The spouse who is seeking a decree of divorce need only show that marital love between the spouses is not prevailing and that there is no hope of the spouses reconciling again.

#### **Grounds for Divorce**

Under matrilineal customary law, there are several matrimonial offences upon which one party seeking divorce can use to support one's application, divorce is possible without one party petitioning on the grounds of the other's matrimonial offence. The court may grant divorce where one party repudiates the marriage or where the parties mutually desire to terminate the marriage. The following are most notable grounds for divorce: First, there is adultery. In matrilineal customary marriages a single act of adultery by a wife is a cause for divorce, secondly, failure by the husband to provide a house for the wife may be a ground for divorce under the matrilineal system, if a wife disobeys her husband, he is entitled to divorce her, in matrilineal customary marriage law, desertion of one spouse by the other for an unreasonable period of time constitutes sufficient cause for divorce, Failure to maintain a wife and children is sufficient for divorce only if the husband has the means to maintain, and persists in his failure for a period of time in the matrilineal marriages.

## 8.12 ANNEX K: LETTER FROM DOF WITH REGARDS TO NJERENJE AND MAKANJIRA SITES

and the last

## REF.NO.DFO/ADM/40

FROM : The District Forestry Officer, P.O. BOX 325, Balaka.

: The costruction Manager, Save the children (AMAA) 811801 P.O. 1101

COPY: The District Commissioner, P/Bag 1, Balaka.

The District Education Manager.Balaka

DATE : 09/08/ 2018.

## TREES AND REGENERANTS ASSESSMENT REPORT

Balaka District Forestry office received communication in writing from Naweta and Kampeni VDCs explaining that they have received a development projects for the proposed construction of Njerenje and Makanjira Community Day Secondary School with funding from USAID and implemented by SAVE The Children. Forestry Department visited the sites on 8th and 9th August, 2018,

After consultations between the Department of Forestry and the communities identified trees and regenerants at Njerenje and Mkanjira sites.bb

NAME OF SITE	TREE/REGENERANT SPECIES NAME			
	LOCAL	ENGLISH	SCIENTIFIC	
	Matowo	Snot Apple	Azanza garckiana	
NJERENJE	Chiphakasa	Scented thorn	Acacia nilotica	
	Mthethe	White thorn	Acacia polyacantha	

	Tsanya	Mopane Species	Colophospermum mopone
	Naphini	Silver terminalia	Terminalia sericea
	Nkuthe	-	Combretum species
Makanjira	Phingo	-	Dalbergia melanoxylon
	Msawa	-	Lonchocarpus capasa
	Chinama		Combretum zeyheri
	Mphando	÷	Bauhinia petersiana
	Mfula		Scerocarya birrea

Out of the listed tree and regenerants species above, the following species are endangered and have to be spared; Tsanya stumps between the stuctures for Njerenje and Phingo and Chinama for Makanjira. The trees to be spared have high value for furniture and medicinal purposes.

The structures at Njerenje will be built where there are no trees but shrubs while Five thousand (5000) trees will be affected at Makanjira.

The Department of Forestry shall provide technical support in collaboration with the Balaka District Council to make sure that the affected trees are replaced.

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Paul Muhosha

District Forestry Officer

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	Tsanya	Mopane Species	Colophospermum mopane
	Naphini	Silver terminalia	Terminalia sericea
	Nkuthe	•	Combretum species
lakanjira	Phingo	7	Dalbergia melanoxylon
	Msawa		Lonchocarpus capasa
	Chinama	-	Combretum zeyheri
	Mphando	-	Bauhinia petersiana
	Mfula		Scerocarya birrea

Out of the listed tree and regenerants species above, the following species are endangered and have to be spared; Tsanya stumps between the stuctures for Njerenje and Phingo and Chinama for Makanjira. The trees to be spared have high value for furniture and medicinal purposes.

The structures at Njerenje will be built where there are no trees but shrubs while Five thousand (5000) trees will be affected at Makanjira.

The Department of Forestry shall provide technical support in collaboration with the Balaka District Council to make sure that the affected trees are replaced.

DATE D9/08/18

Paul Muhosha

**District Forestry Officer** 

## KALATA YA UMBONI

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FROM KAMPENI VAC CHAIR

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Date 18 th July 2018

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#### 8.14 ANNEX M: LETTER FROM DOF APPROVING CONSTRUCTION WORKS AT MAKANJIRA SITE

#### REF.NO.DFO/ADM/39

FROM: The District Forestry Officer, P.O. BOX 325, Balaka.

TO: The Chairperson, Kampeni VDC, T/A Msamala, Balaka

**COPY**: The District Commissioner, P/Bag 1, Balaka.

: Traditional Authority, Msamala

i GYH Kampeni

: Councillor Ke

Kalako

**DATE**: 23rd July, 2018.

## LETTER OF APPROVAL

## Balaka District Forestry office received communication in writing from

Kampeni VDC Chairperson explaining that they have received a development project to construct a Community Day Secondary School in the area with support from USAID and SAVE The Children.

After consultations the community has identified land in Matonga Village which the Matonga Clan has voluntarily offered for free. The land (0.8 ha) which falls uder customary land, is covered with natural trees and it is for this reason that the community thought of seeking recommendation from the District Forestry Office to allow them proceed with project implementation.

Forestry officials visited the area on 16th July, 2018, assessed the area and discussed with Local leaders (VH Matoga, GVH Kampeni VDC Chair and wider community) to have history of the area. This office has every information regarding ownership of the land and that the Matoga clan has voluntarily offered the land to the wider community for construction of a Community Day Secondary School, Refer to the attached letters.

The District Forestry Office therefore has no objections but to give a go ahead for the construction of the mentioned Community Secondary school.

Paul Muhosha

**District Forestry Officer** 

## 8.15 ANNEX N: LETTER FROM VILLAGE DEVELOPMENT COMMITTEE REGARDING NJERENJE SITE

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8.16 ANNEX O: COMMITMENT LETTER FROM NJERENJE COMMUNITIES TO REPLACE LOST VEGETATION COVER

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